

Architecture and the Creation of Worlds

Book 1: The Actual

by

Olubusayo Tolulope Onabolu

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requirements of the Degree of Doctor of Philosophy

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Dedication

This thesis is dedicated to my parents, Busuyi and Jumoke Onabolu, and to my fiancée, Eva Krisilia, for their unyielding love, support and brutal criticisms. To them I am eternally grateful.

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Abstract

Architecture and the Creation of Worlds

This thesis is an enquiry by *creative practice* into the academic and aesthetic (avant-garde) practice of architecture. It explores the notion of the virtual as pure potentiality following an *event*, and defines architecture as the site of such potentiality. (Alain Badiou names *event* as the moment/encounter which initiates a radical break from a *given* situation/state of affairs. There are four types of *event*: artistic, political, scientific and amorous).

The thesis follows two parallel strands of enquiry. One, into the material production of the architectural object and topological space, this is titled *the actual*; and the other, an investigation into the philosophical and antagonistic nature of the virtual, this is titled *the virtual*. *The actual* deals with the literature review, methodology, context of study and proposal for (the site of) actual engagement with theory, including a design element (*House of the Chinese Mantis*); while *the virtual* explores (through a series of five international and interdisciplinary conference papers) the philosophical problems of emergence. The 'context of study' in *the actual* centres around the move from the fetish of

commodities to seduction and concludes with eroticism, while the body of work in *the virtual* concentrates on the notions of sovereignty, becoming, and concrete subjectivity.

Following the technological practices of the avant-garde between hypersurface theory and catalytic formations in architecture, the thesis rejects the claims of virtual space as the digital space of computer-based design, and of emergence as mimetic and/or algorithm based design. It argues that the virtual is the intangible space of creative unfolding following Bergson and Deleuze, but resists the claim in Deleuze that *event* is a chance occurring. Also, it resists the claim in Baudrillard that seduction and/or enchanted simulation are *event* and abandons them to focus on the amorous (one of the four *events* in Badiou). This creates an inflection in the enquiry, moving the thesis towards Plato and the Renaissance, and a contemporary resurrection in architecture, of the tragic, as concrete manifestation of the amorous encounter.

The method of inquiry is structured after the nomadic logic of the War Machine in the philosophy of Deleuze and Guattari, and of the revolutionary nature of fidelity to the scientific *event* in Badiou, which argues that new knowledge is created by 'revolutions' and from the anomalies and collaborations which arise

as a result of such 'detours'; it is a strategy justified by the science historians Feyerabend, Kuhn and Lakatos.

The thesis takes the form of two books (*the actual* and *the virtual*), and concludes that the avant-garde practice of architecture, with its infinite potentialities is distinct from the bureaucratic or State apparatus of building, and that the commonplace appropriation of the avant-garde by the State, as seen in the institutional recourse to parametrics, appears unproductive and uncreative with regard to knowledge.

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Chapter 1

Two Books, an Introduction

1: 1.0 Preface

What is Baroque is this distinction and division into two levels or floors. The distinction of two worlds is common to Platonic tradition.¹

This chapter discusses the overall concept of the thesis: its aims and objectives, its method of inquiry, its contribution to knowledge, and its originality. It argues the manner in which creative practice has been adopted in the thesis, advocating that research by creative practice is not exclusive to reflexive practice or artefact production, but is a revolutionary procedure as argued by Kuhn, Lakatos and Feyerabend, geared towards the production of new knowledge.

It presents two strands of parallel enquiry. One as general outline of the thesis: literature review, methodology and the various theoretical positions from Marx and Deleuze, to Baudrillard, Bataille and Badiou, which are used to build up the arguments on material production and the *objectile*², commodity fetish, and

¹ G Deleuze, *The Fold, Leibniz and the Baroque*, Continuum, London, 2006, p. 33

² *Objectile* is a term given by Deleuze in *The Fold* for objects of technological production as a consequence of new material processes (computation, etc.), exemplifying the work of Bernard Cache, based on multiple curvatures and given primarily as a sensational or sensual object.

seduction in computational avant-garde architecture³. The second (a catalogue), consisting of a series of conference papers⁴, investigates the theoretical underpinnings of the *virtual*⁵ (following Deleuze) and of human subjectivity (following Badiou, Foucault and Agamben) in architecture, which feed back into the main outline of the thesis. The first strand of enquiry focuses on the establishment of methods using historical, philosophical and scientific antecedents, developing an argument for the War Machine as both ontological and epistemological device, relating it to an inquiry in/on architecture and the

³ The definition of avant-garde which is adopted throughout this thesis is one of a protracted and critical engagement with architecture as a body of knowledge, separate from the practice of architecture within the built environment. In this regard, it is a consideration on the methods with which architecture is considered whether as a system of political engagement, of poetic or narrative construction, of dialectic on aesthetics, or as a strictly academic enterprise. Thus, while it is cognisant of the various avant-garde movements which resulted from the Russian Constructivists, the engagements of Bauhaus apropos of Kandinsky, Klee and Moholy-Nagy, the Situationists, the various experiments of Archigram, and more recently, the Deconstructivists, it purports that the avant-garde in architecture should not be restricted to the form or representation of building; i.e., it claims that the various agendas, and the representation of buildings, whether through the use of classical perspective device, or through cubism, or other various anamorphic techniques as in the early paintings of Zaha Hadid, is irrelevant. Instead it advocates a resurrection of the revolutionary aspects of the various movements (whether through drawing, writing, collage, cinematic montage, performance, etc.) as a means of inspiring change within the contemporary body of architecture. Thus, suggesting that avant-garde is not merely antithetical, but revolutionary architectural-philosophical praxis.

⁴ The Circular Ruins, Architexture Conference, 15-17 April 2008, University of Strathclyde, Scotland UK; The Perfumery, Lines of Flight: The Deleuzian Text, 5 September 2008, Manchester Metropolitan University, England UK; The Haunt, Making Sense of Dying and Death, 6th Global Conference, 3-5 November 2008, Salzburg, Austria; Four Twos: Becoming Immortal, The Film-Philosophy Conference, 16-18 July 2009, University of Dundee, Scotland UK; The Camp, Architecture and Justice Conference, 25-27 November 2009, University of Lincoln, England UK

⁵ The *virtual* is the liminal space of production or creation; it is the intangible space of pure potentiality.

development of a thesis on *eroticism*⁶, ultimately drawing parallel between the *art of war* and the *art of love*, following Ovid. The second attempts to resolve the major philosophical problems and deficiencies in the literature encountered in the first; to achieve this, it addresses the contentious issues of *the fold*, i.e., continuous inflection, and of *being*⁷ and the domination within architectural theory of phenomenology; advocating instead *sovereignty*, *inconsistent multiplicities*, *virtuality* and *becomings*. It locates these (following Deleuze and Badiou), within fictional narrative, both literary and cinematic and proclaims their incongruity to State apparatus, either in the form of individual architectural programs/projects or in the design or conceptualisation of cities. This resonates with the claim that 'genuine philosophical engagement' always has a strangeness or foreignness about it, following from Plato in *The Republic*,

⁶ *Eroticism* in this thesis refers to the excesses of the amorous encounter (love), manifested in extreme forms of violence, from rape and murder (including matricide and parricide) to incest and anthropophagy. It is different from the thesis of Bataille, which is based on excess, consumption, and transgression.

⁷ *Being* implies an individual or consistent multiple (group, class, State, etc.), according to Badiou, capable of a count-as-One, meaning that the multiple belongs to a given set. *Becoming(s)* on the other hand following Badiou, implies an inconsistent dynamic multiple, incapable of a count-as-One, hence always external to the State and constantly evolving. It may be contained or included within the State, but it does not belong to it. Agamben has it as the position of the individual or multiple under sovereign exception, i.e. those who fall outside, above, or below the Law: the king, the vagrant, the exile, the immigrant, the refugee, the deviant, etc. The fundamental difference between Deleuze and Badiou is that in Deleuze, the multiple is capable of a count-as-one, while in Badiou, it is not.

where, in a dialogue with Socrates, it is stated that the Ideal city will never be realised, and if it is, it will always be elsewhere⁸.

It concludes through a detour from the contemporary to antiquity via the Renaissance, setting up an environment for investigation into the main concerns of the thesis, namely: seduction/enchantment, eroticism, computation, the virtual and architecture. Thus, while the conference papers may be read independent of the commentary within the thesis, the commentary must be read in conjunction with the papers. The result is a thesis on architecture (as virtuality), which separates the State science of building from the academic, theoretical and philosophical practice of creating worlds, advocating the latter, thus locating architecture on a par with cinema and novelistic prose, as a form of narration or illustration.

Consequently, the thesis presents: *The House of the Chinese Mantis*, as an illustration of enchantment, the site of an evental encounter and the architectural erotic, using contemporary computational methods for the design (the particle dynamics application in Autodesk Maya, following Ali Rahim's

⁸ See A Badiou, *Thinking the Event*, in Badiou and Žižek: *Philosophy in the Present*, Polity Press, Cambridge, UK and Malden, Massachusetts, 2009, p. 23; also, Plato, *The Republic*, Penguin Classics, London, 2007, p. 334 "'I see what you mean,' he said. 'You mean that he will do so in the society we have theoretically founded; but I doubt if it will ever exist on earth.' 'Perhaps,' I said, 'it is laid up as a pattern in heaven, where he who wishes can see it and found it in his own heart.'"

Catalytic Formations), the Adobe Creative Suite, and working theoretically through Deleuze and Badiou.

1: 2.0 Active Oppositional Intelligence: The Manichean Devil

The Manichean devil is an opponent like any other opponent, who is determined on victory and will use any trick of craftiness or dissimulation to obtain victory. In particular, he will keep his policy of confusion secret, and if we show any signs of beginning to discover his policy, he will change it in order to keep us in the dark.⁹

In his essay *The Ontology of the Enemy*, Peter Galison introduces the concept of the Manichean sciences, which he describes as the triad of Operations Research, Games Theory, and Cybernetics.¹⁰ Designed as war sciences, they functioned primarily as human-machine differential analysers; i.e., through statistical and probabilistic analysis using “feedback mechanisms, communication technology and nonlinear processes,”¹¹ their aim was to predict the movement of human-machine projectiles (submarines, aircrafts and ballistics). What Galison was keen to note, was that the impact of this development was a disavowal of human subjectivity; hence, in the examples of aircraft and counter-aircraft fire, the

⁹ N Wiener, *The Human Use of Human Beings: Cybernetics and Society*, Da Capo Press, Boston, 1954, pp. 34-35

¹⁰ P Galison, *Ontology of the Enemy: Norbert Wiener and the Cybernetic Vision*, in *Critical Enquiry*, Vol. 21, No. 1., The University of Chicago Press (Autumn, 1994), pp. 228-266,

¹¹ Ibid. p. 232

enemy was not perceived in human terms, but considered as a machinic other. Further, based on the reports from the censors who checked the mail of the pilots who deployed ballistics, the enemy target was reduced to geographic coordinates; thus the actual impact of ground casualties from the perspective of aerial deployment were inconsequential. As such, it was irrelevant that "on 7 September alone, 448 civilians perished; on 15 September the Germans pitched 230 bombers and 700 fighters against London, Southampton, Bristol, Cardiff, Liverpool and Manchester."¹²

This development of the science of the human-machine couplet has developed to such an extent that the distinction between both has become questionable and sometimes indistinguishable¹³, especially in the industrially developed world; likewise the developments in the science of computation after these war sciences. In keeping with Manuel DeLanda, Richard Dawkins, and Deleuze and Guattari, this enquiry accepts the claim that the development of militaristic arsenal (the arms race) has been fundamental to the evolutionary development of every known species, and the development of the 'civilised' world and humanity at large; thus acknowledging cybernetics and computation as part of

¹² Ibid. cf. Martin Gilbert, *The Second World War: A Complete History* (New York, 1989), pp. 117-25

¹³ See N K Hayles, "Liberal Subjectivity Imperiled: Norbert Wiener and Cybernetic Anxiety", in *How we Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*, The University of Chicago Press, Chicago and London, 1999, pp. 84-112

our natural evolution.¹⁴ Nevertheless, what may be considered the greatest contribution of cybernetics would be its elevation from a probabilistic model to an analytical model of nature through Wiener; hence the concepts of artificial life and emergence that subsequently evolved in software design and programming.

The problem is, that the avant-garde in architecture at the turn of the twentieth century, took on the computational or cybernetic model as a means of theorising the infiltration of informational systems and the increasing impact of computational technologies in the design, production and practice of architecture, but also the impact on the urban environment as a whole. Thus in order to give philosophical credence to the model, they looked to the philosophy of Gilles Deleuze and his efforts with Felix Guattari, especially as concerned technological production, subjectivity and emergence.

This enquiry claims that the views taken on the theses of Deleuze in this regard have been largely superficial¹⁵, and that the avant-garde have been too easily seduced by the reference to the mathematical production of objects in the thesis

¹⁴ M DeLanda, *War in The Age of Intelligent Machines*, Zone Books, New York, 1991

¹⁵ This may be, in part, due to the Heideggarian approach, which cautions against the wholehearted motivation of technological thought. See M Heidegger, *The Question Concerning Technology and Other Essays*, W Lovitt (trans.) Harper & Row Publishers, New York, 1977; This position will be given further consideration in future research.

on '*Leibniz and the Baroque*' and the notion of the *deterritorialised* subject in the theses on '*capitalism and schizophrenia*', thus omitting the more profound propositions contained within those works: *a typical example is with the discussion on architecture as nomad science or State science, in the treatise on the War Machine (the only sustained thesis on a history of the practice of architecture in the writing of Deleuze and Guattari),¹⁶ which is conspicuously missing from the general proclamations of the avant-garde.*

1: 2.1 Aims

Thus, the research has two concerns, hence its outcome as two volumes (or books); one is twofold, and concerns an investigation into the theory of cybernetics and computation, and the theories of Deleuze on production (mathematical, technological or otherwise). The other concern, which is of personal interest to the researcher, is to discover how the theories of computation and production can contribute to the creation of enchanting or seductive architectural form.

¹⁶ G Deleuze and F Guattari, *Capitalism and Schizophrenia: A Thousand Plateaus*, Continuum, London and New York, 2004; see also G Deleuze and F Guattari, *What is Philosophy*, Verso, London and New York, 1994, p. 186, where they discuss architecture as a sustained art form in the order of painting or the cinematic frame. "And not going beyond form, the most scientific architecture endlessly produces and joins up frames and sections. That is why it can be defined by the "frame," by an interlocking of differently oriented frames, which will be imposed on the other arts from painting to cinema."

While both concerns may appear incompatible or unrelated, the core assumption/question at the beginning of the research was: *"why would there be such a fuss about computation and theory if the result was not for more enchanting architectural form?"*

Further, the assumption made in the enquiry was that the fusion of seemingly incompatible concerns would provide a basis for interesting research. It was unknown to the researcher at the time (but later incorporated into the methodology) that the philosopher and cultural critic Slavoj Žižek, (following Deleuze and Lacan) advocated such practices under what he termed "short-circuiting", i.e., the consequence of using a 'marginalised' mode of enquiry as an investigatory device into a mainstream discourse, philosophy, symptom or concern (or vice versa), in order to reveal through 'cracks in the discourse' what was previously hidden from view, or in order to reveal a different, often more occultic¹⁷ aspect of the concern.

¹⁷ Occultic is used here in the clinical sense, as a term for the more fundamental cause to certain symptomatic manifestations. It is significant, because Žižek derived the "short-circuit" from his study and practice of Lacanian psychoanalysis, where it was used to discover the root cause to the pathologies manifested by the analysand. See S Žižek, *The Parallax View*, The MIT Press, Cambridge MA and London, 2006.

1:2.2 Methodology

The decision to use the short-circuit approach revealed that there were several theoretical perspectives to the concerns being investigated. One perspective was the liberal humanist framework, in which cybernetics and information theory announced the death of man, following Foucault's thesis on biopolitics, and was to be resisted. Another was the progressive rightwing (*posthumanist/transhumanist*) thesis, that the death of man as we know was incumbent and should be embraced as part of an evolutionary process; and another, the radical left (historical materialist) position which posited that if indeed man as we know it is dying, or is dead, what does it say about the construct called 'man/human'? *While there are several other perspectives, it would be impossible to sustain an argument based on all.*

Thus, the view of the researcher is with the historical materialist position, and is based on a personal and political history: an immigrant student from a developing country and former colony, a history of political dictatorship, intolerance (racial, ethnic and moral), and socio-political and personal violence. The decision based on this position, was thus, to abandon the Western moralist world view on man/human and seek out the inhuman apropos of Žižek and Nietzsche. The result was that the inhuman only existed in opposition to the

established/dominant criteria by which the determination man/human persisted. In fact it was discovered that man/human was a juridico-political category, and was in no way substantiated by any empirical (biological) determination.¹⁸

Further, the literature on the opposition to Western domination (which is not covered in the literature review, but in the research as a whole, particularly in the publicly presented papers), has been mostly reactionary, whether in the 'politics of the victim' played out by some feminist and postcolonial scholars, or in the nihilistic impulse of some postmodernist and deconstructivist scholars; therefore, they were also not considered as relevant to the enquiry. Fortunately, the interest in Žižek and historical materialism, but also the interest in the mathematics of cybernetics as used with relevance to architecture, led to a discovery of the work of Alain Badiou; thus, his *ethics* and mathematical ontology resolved the problems that had been plaguing the theoretical position of the research.

¹⁸ See G Agamben, *Homo Sacer: Sovereign Power and Bare Life*, W Hamacher and D E Wellberry (eds.), Stanford University Press, Stanford CA, 1998; see also S Žižek, *The Ticklish Subject: The Absent Centre of Political Ontology*, Verso, London and New York, 2000

1: 2.3 Creative Practice: The War Machine

Badiou's *ethics*, following Marx and Mao Zedong, is one of determined oppositional struggle, based on fidelity to a proposition of universality, i.e., it proposes the possibility of an egalitarian society, not based on sameness (of ideology, or other political determinations), or on minoritarian politics (racial, ethnic, sexual, gender, etc.), but on differences as the truth of every situation: that there is no difference, because no two 'terms' are alike or conciliatory; i.e., there is only multiplicity. Thus, for a sustained logic of the multiple, he resorts to set theory, stating that because the multiple is all that is, and any form of representation of that multiple, or its count-as-one, is based on its inclusion within a certain situation. Thus, the count-as-one of any multiple is predicated upon the logic of inclusion. The State on the other hand, is the structure that determines the count as one of the situation, and can be juridico-political, historic-social, or whatever. Within these determinations, he continues that every State functions based on the logic of inclusion and belonging. Thus a given multiple may be included in a situation and may belong to it, e.g. as with citizens, or it may be included in the multiple but may not belong to it, e.g., as with immigrants, minorities, deviants, etc. Nevertheless, Badiou's thesis is predicated upon the multiple that belongs to itself, this he calls the *evental*

multiple. Therefore, an *event* is any multiple that belongs to itself in a situation. In this regard, the *event* is what inspires radical change within any situation; it takes the form of a declaration: "I will", "I love", "I am", etc., and is only named *event* retrospectively. Further, for Badiou, subjectivity is predicated on fidelity to an *event*. Thus only through struggle (oppositions and antagonisms, or in the Bergsonian sense, endurance), in fidelity to a declaration, does the subject emerge. It is in the endurance of antagonistic struggle, that being becomes¹⁹. Badiou names four events: the amorous (love), the scientific (science), the political (politics), and the artistic (art). These events, he claims, are based upon pure declarations from the multiple of a situation, it is this pure multiple that he calls 'nothing'; i.e., the multiple resists representation, and is irreducible to a count-as-one: it belongs to itself.²⁰

Nevertheless, Badiou is quick to warn that the declaration which marks *event* has to be one of total indifference to the situation²¹, which he claims is rare,

¹⁹ Further research will be taken into the nature of Being and Becoming, specifically with regards the work of Hegel and Schelling, because of the sustained argument that becoming is all there is; a proclamation we find in Bergson. As such, for being to enter into becoming, there is a necessity for a deconstruction of the apparatus that sanctions Being. I think this is the problematic found in much of the work of Heidegger and Derrida, following Hegel.

²⁰ See A Badiou, *Being and Event*, Continuum, London and New York, 2005

²¹ Badiou does not consider the Nazi declaration as *event*, because he claims it was a simulation of two separate declarations "nationalism" and "socialism", geared towards privileging a certain group; see A Badiou, *Being and Event II: The Logic of Worlds*, Continuum; also A Badiou, *Ethics: An Essay on the Understanding of Evil*, Verso, London and New York, 2002

hence that the subject is rare; but that subjects emerge and are modified through fidelity to the *event*; i.e., they are vectors which emerge (more specifically, are in duration) with the matrix of the *event* and the *evental* site (the situation). The subject is thus the political activist, the lone researcher, the artist, or the lover(s).

1: 2.4 The War Machine and Research

Therefore, from a position of an individual researcher, in order to break with the domination of traditional research methods and the dominant socio-political worldview, the research resorted to *creative practice* as a methodology²². In this regard, instead of the reactionary methods of endless criticism, it resorted to an engagement with the subjects of enquiry, modifying itself through public feedback, criticism and reflection. Thus, with regards to computation and design, as much as possible, it engaged with computational and parametric methods, and advocates a certain type of computational practice, with its proposal for *The House of the Chinese Mantis*; with regards to the theory of

²² Kuhn advocates creative research as essential to scientific discoveries and regulations, but is keen to warn that this does not come without a struggle against both the institution which the new field of knowledge is emerging from, and the field of knowledge which it seems to be threatening, often ending with a marginalized discipline, which is itself a source of new knowledge. Peter Hallward notes the same on Imre Lakatos, stating that their methodologies are closest to the scientific method advocated by Badiou. See T S Kuhn, *The Structure of Scientific Revolutions*, Third Edition, The University of Chicago Press, Chicago and London, 1996; also P Hallward, *Badiou: a Subject to Truth*, University of Minnesota Press, Minneapolis and London, 2003, pp. 209-221

production (becoming) in Deleuze, it engaged with continental philosophy, through rigorous study and public output, including several conference and publication proposals (submitted abstracts), workshops, seminars, conference presentations and a publication, advocating sovereignty (following Badiou and Nietzsche) as concrete subjective becoming. The conference presentations (papers) were interdisciplinary, and are contained in the second volume of the thesis.

Finally, as with every struggle or war effort, there were economic, political and legal considerations. Thus, in view of those considerations and of the status of the researcher as an immigrant²³, the constraints on movement (travelling, visas, etc.) as well as on employment, and mode of study proved adequate justification for active opposition, especially because as a self funding student, those restrictions created additional levels of difficulty. Therefore, following the principles of the martial arts (the Arts of War) the enemy's strengths and resources were used against it in order to achieve the objectives of the inquiry; it

²³ My issue with immigrations is tackled in Volume II of thesis, *The Virtual*; see Chapter 1, 'The Camp'.

is stated as one of the surest ways of obtaining victory, without incurring severe casualty to the 'body'.²⁴

Without an understanding of the harm caused by war/ It is impossible to understand/ The most profitable way of conducting it. The skillful Warrior [...] brings equipment from home/ But forages off the enemy.²⁵

The implication was that the research was funded through income both from friends and family and from carefully 'crafted' part-time employment arrangements in architectural offices. The advantage of employment (apart from the obvious financial benefits) was that it allowed for a reflection on the difference between academic investigations and standard professional practice in architecture. Thus, while the academic pursuit of architecture may benefit from critical engagement, architecture, operates differently as a profit driven mechanism, because it has to resolve several complex issues which are often shielded from academic pursuits: *human and technical resourcing, methods of contractual/procurement, professional and technical consultation, professional insurance, statutory concerns (planning application and building regulatory*

²⁴ Incidentally, Žižek, following Marx and Engels, state that Capitalism harbors the instruments for its own demise. See K Marx, *Capital: A Critique of Political Economy*, Vol. 1, Penguin Classics, London, 1990; K Marx and F Engels, *The Communist Manifesto*, Penguin Classics, London, 2002; S Žižek, *In Defense of Lost Causes*, Verso, London and New York, 2008

²⁵ Sun-Tzu, *The Art of War*, J Minford (trans.), Penguin Books, London, 2003

procedures), specific political motivations, client budgets, and developer and contractor profits, etc.

1: 3.0 Contributions to Knowledge

Therefore, the engagement with theory was specifically driven by the incompatibility of the two positions; i.e., academic and professional; thus the position that the architectural avant-garde should concentrate on the theoretical production of architecture, resisting any allusions to building, and advance it as a field of knowledge in itself (it should affirm its own sovereignty). It does not claim that professional practice cannot or should not benefit from theory, nor that there are no insights to be gained in this engagement, but that the interests of philosophical engagement, run counter to statutory engagement, thus, if the architectural avant-garde want to do philosophy, it should be as an engagement in itself, as politics, science, art, or love, and cease being an appendage to architectural history or design and professional practice.

Thus, while an avant-garde science of building might be manifest in Building Information Modelling or Parametrics, as architecture, the science falls under domination of the State and ceases to be philosophical or avant-garde. Hence for

architecture to be considered avant-garde, it must seek other modes of production.²⁶

The War Machine as creative practice, thus accepts the limitations of each situation, but does not subject itself to it, either in the form of reactionary violence or nihilistic resistance. The anarchistic method however, as suggested by Feyerabend is the mode of the War Machine, because it is only termed anarchistic in as much as it resists definition; i.e., its methods cannot be reduced to a specific set of protocols.²⁷ This is consistent with Badiou's concept of *event*, as that which resists definition, because while it is included within a given situation or state of affairs, it belongs only to itself. The War Machine or the Manichean Devil is thus the arch-anarchist apropos of Nietzsche's *übermensch*. It is also the decolonised subject of Frantz Fanon.²⁸

The contributions to knowledge are thus methodological, with regards advancing the Art of War as a viable methodology in creative research;

²⁶ Diller and Scofidio's original proposal for the Blur Pavilion complete with the prosthetic skin is an example of this, as it forces a philosophical evaluation of subjectivity; see E Diller and R Scofidio, *Architecture as a Habitable Medium*, in *Disappearing Architecture: From Real to Virtual to Quantum*, Birkhäuser, Switzerland, 2005, pp. 184-195

²⁷ P Feyerabend, *Against Method*, Third Edition, Verso, London and New York, 1993

²⁸ See F Fanon, *The Wretched of the Earth*, Penguin Classics, London, 2001; A Badiou, *Ethics: An Essay on the Understanding of Evil*, op cit; A Badiou, *Being and Event II: The Logic of Worlds*, op cit; F Nietzsche, *Human, All Too Human: A Book for free Spirits*, Cambridge University Press, Cambridge, 1996

epistemological, contributing to the existing body of architectural theory; and ontological, advocating a new field of knowledge within the body of architecture.

1: 4.0 Background to Research

The research started based on an interest in the possibility of generating urban form using genetic algorithms, animation software and the statistical and probabilistic models in cybernetics, widely known in architecture under the rubric of parametrics.²⁹ The objective of the initial proposal was to assess if such design methods (incorporating continuous curvature) were capable of providing viable urban environments. To complicate the research further, the site was to be chosen from one of the major tropical cities of the developing world. After much deliberation, it was decided that the parameters for assessment and criteria for design would be inadequate for a rigorous urban enquiry. Subsequently, the proposal was modified to focus on a single building. Similarly, this met with another set of difficulties, as there were no viable

²⁹ P Schumacher (Zaha Hadid Architects), *Parametric Diagrams*, in *The Diagrams of Architecture*, M Garcia (ed.), AD Reader, John Wiley & Sons, Sussex UK, 2010; see also P Schumacher, *Parametricism*, in *Digital Cities, Architectural Design*, Vol. 79, No. 4 (July/August 2009), pp. 14-23

models for assessing such buildings within the framework an urban environment.

The implication was that in order to carry out hypothetical design research, empirical methods would be inadequate. Thus, short of being a deterrent, the proposal was again modified to question the specifics of building typologies, spatial location, etc., and specifically the notion of enchanted or seductive form. Consequently, with regards to the thesis of Deleuze that had dominated the literary output of the architectural avant-garde, it was concluded that architecture within Deleuzian space would be in the form of narrative (literary or cinematic) and invariably the architectural typology would be residential; further it was also assumed that within the realm of literature, the most proximal to the seductive, was the erotic. Thus, the first attempt to address the assumption, was in response to a call for papers on *Architexture* held at the University of Strathclyde in Glasgow UK, in April 2008. The paper was an attempt to resolve the notion of jouissance and eroticism in architecture through a Borgesian type narrative (*The Circular Ruins*³⁰), it was predicated on the disjunctive synthesis (nonsense writing) of Lewis Carroll as advocated by Deleuze in *The Logic of Sense*, and the encyclopaedic style of Borges: mixing

³⁰ See Volume II of thesis, *The Virtual*, Chapter 5; also J L Borges, *Fictions*, Penguin Classics, London, 2000, pp. 44-50

fact with fiction in the space of a continuous narrative. The paper met with certain resistance and criticism as to the clarity of the argument and the concept of architecture as specifically textual practice. Subsequently, the other papers used film and actual fictional architecture. Another attempt was in response to a call for papers on Making Sense of Dying and Death, held by Interdisciplinary.Net in Salzburg, Austria in November 2008. In that paper, the premise for the discussion on death was 'nonsensical', and started with the premise that from the perspective of sympathetic magic, death is simply a transformation from one thing into something else, or a transformation from one moment to the next; i.e., a pure becoming. Thus, the eighteenth century French architect, Jean-Jacques Lequeu's section for the *Gothic House* or *Haunt of Magicians*, served as the site for a sovereign becoming, because it was a deliberate entering into death; an initiatory process, which was a descent into Hades, and a process of rebirth through Tartarus, Cocytus and Menosyne. The paper continued by asserting that the other forms of death associated with sympathetic magic were acedia, psychasthenia and boredom, as experienced in the *Myths of Noon*, by Roger Caillois and in *War and Peace* by Tolstoy. In all, the architectural system transformed from the *Haunt of Magicians*³¹ through the

³¹ Ibid. The Haunt, Chapter 2 this paper was published (eBook) as part of the conference

noon complex to the battle field. The conclusion was that while the initiatory process was a type of becoming, it was grounded ideologically in moral universe and the existence of an Other; further, that the transformation from the spatial constraints of the Gothic House to the fluidity of the field of battle, while being consistent with the Deleuzian transformation was a banal becoming, as it was a strictly aesthetic becoming, inconsequential to a sovereign becoming. The other papers addressed architecture as a virtuality, working with references from movies such as *Alien* vs. *Predator*, *Transformers* and *Perfume*, but in the case of *Perfume* which was a response to a call for papers for the 'Line of Flight' Deleuzian conference held at the Manchester Metropolitan University, Manchester UK, both the novel by Süskind and the film adaptation were used to discuss *The Perfumery of Grenouille* as a Sovereign Encounter. Finally, in the response to the call for papers for the Architecture and Justice conference held at the University of Lincoln, Lincoln UK, the reasoning behind the War Machine was articulated through recourse to axiomatic reasoning, biopolitics, the logic of juridico-political exclusion, and the definition of Justice according to Plato.³²

proceedings, *Re-Imaging Death*, D R Cooley and L Steffen (eds.) Inter-Disciplinary Press, Oxford, 2009, pp. 44-55, ISBN: 978-1-904710-82-0; the final draft, which is contained in this thesis, was selected for publication in a forthcoming Book by Asa Kasher.

³² Ibid. *The Camp*, Chapter 1

Running parallel to these enquiries was the investigation into algorithmic architecture, and parametric and animation techniques (Particle Dynamics and Soft and Rigid Body animation), using Autodesk Maya and the Grasshopper plug-in in Rhinoceros. Soft and Rigid Body animation and Grasshopper were not used in the illustration of the *House of the Chinese Mantis*.

1: 5.0 Conclusion

As stated, the aims of the research were to investigate the use of cybernetic and computational theory and technique in the production of architecture, and to produce enchanting and/or seductive architectural form working with the thesis of Deleuze on production, and the method of enquiry was stated as the War Machine based on the ethics and ontology of Alain Badiou.

The consequence is that in the thesis of Badiou, enchantment is the name given to the presentation of the *event* of the amorous encounter, or more specifically, the scene of the Two; i.e., enchantment is spectral, it is intangible and resists representation, but it is affective as is the amorous scene. The research thus proceeds from what it assumed to be the enchanted animated forms of the computational avant-garde to the amorous scene in Badiou, with its artistic presentation in Virgil and Ovid. It embraces Ovid's metaphor of the Art of Love

as the Art of War, in that both engage in similar strategies of cunning and deception to achieve victory, but also, both are rife with antagonisms; similarly, both require action in the world, and thus endure.

It traces the amorous encounter from the classical period to its occurrence in Gnosticism and Hermetic philosophy, then to the Renaissance, and to its manifestations in the writings of de Sade, Sacher-Masoch, Bataille, and Pauline Reage.

In conclusion, it asserts that the erotic is the artistic form of the amorous encounter, acknowledging that as a presentation, it takes on narrative form; i.e., it incorporates duration, and its expression in architecture can only be illustrative and/or cinematic. In this way, it advocates illustration as a method of architectural production, following both Deleuze and Badiou. On the question of subjectivity, it rejects the thesis of Deleuze as inadequate and as aesthetic, privileging only a few (confirming Marx's rejection of the Capitalist mode of production), and incapable of establishing a sovereign position.

The thesis is thus submitted in two volumes, as separate books: one, *The Actual* outlining the research, its methods, object of study, transformations and outcomes; and the other, *The Virtual*, which is a catalogue of papers presented at

international and interdisciplinary conferences, investigating the nature of virtuality, subjectivity, becoming and sovereignty.

Chapter 2

Methodology: *Constructive Evolution and the War Machine*

2: 1.0 Introduction



The above image is a collage from the film, 'Wanted'¹, it shows a specially crafted bullet (middle), loosing various parts of its component parts as it heads towards the city (the silhouette on the left) and coming out of the target's head. It is an interesting ballistic device, because as opposed to computed projectiles, this projectile, albeit phantasmatic, takes its curvature from a combination of the craftsmanship of the bullet, the nature of the barrel and the will of the marksman.

...

¹ T Bekmambetov, Universal Studios and Ringerike GmbH & Co. Luftfahrtbeteiligungs KG, 2008

This chapter discusses the methodology used in the research, advancing the nomad science of what Deleuze and Guattari name the War Machine, and prescribing it through examples from physics, ballistics, cybernetics and architecture, as a revolutionary practice, consistent with the truth procedures of Alain Badiou. It proposes the Art of War as a rigorous scientific method, evolving from nomadic warfare in the steppes, to weapons research in cybernetics, and the thesis of Dawkins on constructive evolution and the arms race.

It examines the anarchistic methodology of Feyerabend and defends it as consistent with nomad science, through its fidelity to the *event*² of the War Machine; and distances itself from the claim³ that while Kuhn and Lakatos are

² *Event*, according to Badiou, is the foundational moment of a concrete becoming. It is a-historical, amoral, and exists outside of any particularity, collective or State. It is the moment of philosophical encounter, i.e. an encounter between opposing and antagonistic forces; however, the event leaves no traces: it is pure potentiality. Badiou names four such events, the scientific, artistic, amorous and political. In this regard, the War Machine is an event, a pure radical potentiality, external to the State and/or any/every established epistemology.

Badiou states, "I name 'event', a rupture in the normal disposition of bodies and normal ways of a particular situation. Or if you want, I name 'event' a rupture of the laws of the situation. So, in its very importance, an event is not the realization/variation of a possibility that resides inside the situation. An event is the creation of a new possibility. An event changes not only the real, but also the possible. An event is at the level not of simple possibility, but at the level of possibility of possibility. [...]". See Badiou, A. Is the Word "Communism" Forever Doomed? October 28, 2009.

[http://versouk.wordpress.com/2009/10/28/alain-badiou-is-the-word-](http://versouk.wordpress.com/2009/10/28/alain-badiou-is-the-word-%E2%80%9Ccommunism%E2%80%9D-forever-doomed/)

[%E2%80%9Ccommunism%E2%80%9D-forever-doomed/](http://versouk.wordpress.com/2009/10/28/alain-badiou-is-the-word-%E2%80%9Ccommunism%E2%80%9D-forever-doomed/) Accessed at 14:29 on January 09, 2010.

³ See P Hallward, Badiou: A Subject to truth, University of Minnesota Press, Minneapolis and London, 2003, p. 212

closest to the thesis of Alain Badiou, on the revolutionary procedures in science, Feyerabend is not (because he sanctions opportunism and deviations from procedure). It claims in keeping with Badiou, and Deleuze and Guattari, that the War Machine is external to the State, i.e. sovereign or juridical apparatus, but rejects the claim by Deleuze and Guattari that it can be considered in a dualistic relationship with the State, stating that, as a political or epistemological apparatus, it constitutes an incompatible multiplicity (incapable of forming a consistent singularity), forever removed from the State. It advocates interdisciplinary and often traditionally incompatible methods of knowledge production, stating that it is within the ruptures, accidents and anomalies⁴ of these procedures that revolutionary knowledge is produced, taking examples from the cloud chamber experiments of Charles Wilson; the development of the field of cybernetics with Norbert Weiner; and even the arms races in natural systems. As such, when nomad science founds an epistemology, its only connection to State science is through forms of simulation or appropriation,

⁴ The scientific *event* is the moment when the researcher chooses to head in a given direction without any navigational tools, and without knowing specifically why. This brings about new collaborations, problems and solutions, which lead to new forms of knowledge. It is the fidelity to this event, and not to any specific procedure that produces knowledge. As such, when Feyerabend is accused of vacillating, it is argued here that the methodology he advocates is in fact a properly 'external' method, incapable at its given instant of strategic articulation. It is thus with hindsight or in the case of laboratory practices (meticulous recording) that the method is capable of articulation and subsequent appropriation.

which is exemplified in architecture, both in the appropriation and subordination by guilds and the State, of the science of building, from practices of itinerant journey men between the Gothic period and the Renaissance, and the appropriation of cybernetics by John Frazer, in what would become Evolutionary or Emergent architecture and the ecological approach to design.

Through an evaluation of the War Machine and the evolutionary procedures in Deleuze and Guattari, DeLanda and Dawkins, the chapter concludes by rejecting Frazer's thesis on Evolutionary Architecture and subsequently any claim to emergence or evolutionary procedures in architecture based on practices of simulation, appropriation or subordination to juridical or sovereign machinery, advocating instead a recourse to *event* as outlined in the parallel enquiry.

The literature review which follows gives greater clarity to the deficiencies within the current understanding of emergence, evolutionary procedures (genetic algorithms etc.) and computational practices in architecture.

2: 2.0 The War Machine as Event

From the outset, it must be made clear that the War Machine is not a form of localized insurgents or minorities or groups, as implied by Deleuze and

Guattari⁵, in fact, it is a pure sovereign multiple, separate from the State and not reducible to the operation of the *count* or unitary articulation. It is an inconsistent multiple not subject to the operation (count-as-one) of any representational structure. It is thus not the manoeuvring act of any localized group, but the procedure of a revolutionary movement. The War Machine, in the language of Badiou, is included in the State (the count-as-one of a situation), but does not belong to it. This is contrary to Deleuze and Guattari who claim that the War Machine and the State apparatus form the dyad of political sovereignty⁶. The War Machine is nomadic and Stateless.

2: 2.0.1 *The Machinic Phylum*

It is the passage (diagrammatic trace) of this War Machine that DeLanda names the machinic phylum (after phylogeny trees, showing the evolutionary map of species, based upon probabilistic events); i.e., the transitional space of events, these events themselves being phase transformations or the moment of crystallization of morphogenetic singularities, points of irreversible and unknown change, points of crystallised transformation.

⁵ See G Deleuze and F Guattari, *Capitalism and Schizophrenia: A Thousand Plateaus*, 2004, pp. 387-467

⁶ *Ibid.*

For the War Machine, these are the points where a new discovery changes the state of a practice: where the discovery of gunpowder changes the form of field warfare, where the cloud chamber or dental plates change the nature of experimental physics forever.

In undertaking this research into architecture, the method of enquiry has been pursued in fidelity to the War Machine, deviating, isolating and modifying when required.

2: 2.1 Inclusion, Belonging, and the State

The War Machine is a vector of resistance to the domination of the State. The State is a sovereign entity which functions based on the strategy of violence and exclusion⁷ through bureaucratic and militaristic means. Therefore, in proposing the War Machine as a methodology, recourse is made to the politics of inclusion and belonging, discussed by Alain Badiou through his analysis on Cantorian set theory.

*Inclusion is in irremediable excess of belonging. In particular, the included subset made up of all the ordinary elements of a set constitutes a definitive point of excess over the set in question. It never belongs to the latter.*⁸

⁷ See G Agamben, *Homo Sacer: Sovereign Power and Bare Life*, Stanford University Press, Stanford CA, 1998; G Agamben, *State of Exception*, The University of Chicago Press, Chicago and London, 2005; also Plato, *The Republic*, Penguin Classics, London, 2007; Plato, *The Laws*, Penguin Books, London, 2004

⁸ A Badiou, *Being and Event*, Continuum, London and New York, 2005, p. 85

In categorising the State as a system of inclusion and belonging, Badiou states that the State is the metastructure for which the count-as-one of belonging is possible. Thus, while every set or sub-set which finds itself within a certain historic-social situation is included in it, it only belongs to the set if it is counted-as-one within the situation; a condition which becomes apparent with the legal (juridico-political) designation of the terms: *homo sacer* and non-citizen, i.e., slave or immigrant, etc.⁹

This idea must be understood: the essence of the State is that of not being obliged to recognize individuals - when it is obliged to recognize them, in concrete cases, it is always according to the principle of counting which does not concern the individuals as such. Even the coercion that the State exercises over such or such an individual - besides being for the most part anarchic, unregulated and stupid - does not signify in any way that the state is defined by the coercive 'interest' that it directs at this individual, or at individuals in general. [...]. The interpretation [...] of this idea is that the State solely exercises its domination according to a law destined to form-one out of the parts of a situation; moreover, the role of the State is to qualify, one by one, each of the compositions of compositions of multiples whose general consistency, in respect of terms, is secured by the situation, that is, by a historical presentation which is 'already' structured.

⁹ I have dealt with the problem of inclusion and belonging with regards the politics of colonization and the determination of territories in the essay *The Camp Paradigm: Keeping out the Madman, or Injustice to Becoming*, presented at the Architecture and Justice Conference in Lincoln UK, November 2009, and contained in the second volume of this thesis.

The State is simply the necessary metastructure of every historic-social situation, which is to say the law that guarantees that there is Oneness, not in the immediacy of society - that is always provided by a non-state structure - but amongst the set of its sub-sets.¹⁰

According to Badiou, following Marx and Engels, in order to for the State to manage the impasse of belonging and inclusion certain machinations of excrescence become essential; namely: the bureaucratic and the militaristic arms of the State. This is why the State maintains a monopoly over the distribution and possession of arms, and the organisation of structured violence. Otherwise there will be continuous and protracted civil war. Badiou, like Marx and Engels, and following Rousseau¹¹, posits that the function of politics is the revolutionary assault on the State. However, instead of a strict call to armed struggle, Badiou states that the assault may be peaceful or violent; and, what remains in his political thesis, is that the revolutionary must resist the count-as-one of the State¹². Therefore, for the revolutionary method the thesis adopts, Deleuze and Guattari's claim that the War Machine is one with the State cannot be accepted.

¹⁰ A Badiou, *Being and Event*, op cit, p. 105; with regards State structures, Badiou refers to two types determined by Aristotle: the pathological (tyrannies, oligarchies and democracies) and the normal (monarchies, aristocracies and republics). See p. 104

¹¹ See P Hallward, *Badiou: A Subject to Truth*, University of Minnesota Press, Minneapolis and London, 2003

¹² The State as the count-as-one of a historic-social situation includes the establishment of institutions, and the laws that sanction inclusion and exclusion from such organized bodies.

In their *Treatise on Nomadology*, reference is made to Michael Kohlhaas, a disenfranchised horse-dealer, whose metaphorical treatise on exclusion is, based on self imposed ban, resulting from the irregularities of the juridico-political enterprise of the State. The difference between Kohlhaas' exclusion and that of non-belonging, is that under such a situation, there is no count-as-one; i.e., the state is completely exclusionary, whereas Kohlhaas is citizen (he belongs to the state) with rights, albeit under an oppressive or feudal regime. Below is a discussion between Kohlhaas and Martin Luther, about a public proclamation made by the latter against the former:

'You impious and terrible man!' cried Luther, 'who gave you the right to attack Junker von Tronka in pursuance of decrees issued on no authority but your own, and when you could not find him in his castle to come down with fire and sword on the whole community that gave him shelter?' 'No one your reverence,' replied Kohlhaas, 'from this moment on! Information I received from Dresden deceived me and led me astray! The war I am waging against human society becomes a crime if this assurance you give me is true, and society has not cast me out!' 'Cast you out?' cried Luther staring at him. 'What mad idea has taken possession of you? Who do you say has cast you out from the community of the state in which you have lived? Has there ever, so long as states have existed, been a case of anyone, no matter who, becoming an outcast of society?' 'I call that man an outcast,' answered Kohlhaas, clenching his fist, 'who is denied the protection of the law! For I need that protection if my trade is to prosper; indeed it is for the sake of that

*protection that I take refuge, with all the goods I have acquired, in that community. Whoever withholds it from me drives me out into the wilderness among savages. It is he - how can you deny it? - who puts into my hands the club I am wielding to defend myself.'*¹³

In the above, the state of exclusion is not directly apparent, because Kohlhaas belongs to a privileged class of landowners and merchants, while the authorities against whom he is in arms are the Law: the megastructure that determines the State (as evidenced in his continuous resort - to no avail - to legal methods, to prove that the authorities are not in cahoots with the law makers). Further, in lieu of a Marxist position on revolution, Kohlhaas's revolt is not universal, as he seeks only his own redress, and is quite happy for the State structure to remain as it is, with slaves and serfs, etc., what Marx and Engels refer to as 'conservative or bourgeois socialism'.¹⁴ Further, Kohlhaas seeks revenge, and not justice, as the justification for his onslaught is based on the usurping of his property (two horses) by the Junker. Again, in Deleuze and Guattari's recourse to Nietzsche, this is also unacceptable, as it places Kohlhaas within the same criminality as the Junker and the other authorities whom he wishes to address.

¹³ H von Kleist, Michael Kohlhaas, in *The Marquis of O - and Other Stories*, Penguin Books, London, 2004, p. 152

¹⁴ See K Marx and F Engels, *The Communist Manifesto*, Penguin Classics, London, 2002

Nietzsche discusses this through the analogy of the Tarantula in Zarathustra;¹⁵ which is why Deleuze and Guattari can claim that the War Machine resembles banditry. However, when the War Machine exists within a state of exception, the juridical apparatus that criminalises the bandit becomes inapplicable. Thus, it remains in exteriority to the State¹⁶. Following Fanon, it is the *event* of decolonization, not of a reactionary violence, but of a concrete act of becoming.¹⁷

These, amongst others, are reasons for rejecting the War Machine of Deleuze and Guattari, because their philosophy is conservative and reactionary, aggressively protecting the logic of capitalism and imperialism.

As has been made evident, the logic of inclusion and belonging implies the privileging of certain sub-sets. Nevertheless, the term (War Machine) will be sustained for the methodology as the name of *event*, political, scientific or otherwise, because while the War Machine of Deleuze and Guattari may not be true for the State as a politico-historic entity, it may be acceptable for science

¹⁵ F Nietzsche, *On the Tarantulas*, in *Thus Spoke Zarathustra: A Book for All and None*, Cambridge University Press, Cambridge, 2006, pp. 76-79; ““We want to exact revenge and heap insult on all whose equals we are not” - thus vow the tarantula hearts.” p. 77

¹⁶ The first axiom of the war machine in Deleuze and Guattari is that it is exterior to the State apparatus. The position taken in this thesis is that the war machine is exterior to the State; the seemingly subtle difference is quite important, because being external to the apparatus may still imply an interiority with the state and the possibility of its count-as-one, as evidenced in Deleuze and Guattari.

¹⁷ See F Fanon, *The Wretched of the Earth*, Penguin Classics, London, 2001; also N Nesbitt (ed.), *Jean-Bertrand Aristide presents, Toussaint L'Ouverture: The Haitian Revolution*, Verso, London and New York, 2008

(and knowledge) as a socio-historic body (outside of any juridico-political situation), hence the possibility of extending the *treatise on nomadology*, and the relevance of Kuhn on scientific revolutions.

2: 3.0 The Scientific Event as War Machine

The examples used in this section are from physics, as it is the closest to the War Machine and in the words of Badiou, it is the science that “catches hold of being-as-being through its mathematicity”¹⁸. In modern times, even in antiquity, it has been the science of the theory of matter, about the states of matter and the universe. Badiou’s position of physics as a truth procedure is mirrored in the work of Kuhn and Lakatos where they each separately argue for the revolutionary procedures of scientific research through, innovation, commitment and a violation of predominant methodologies, expectations and assumptions¹⁹, as the generic procedure of “transformation of a domain of knowledge”²⁰; Badiou as Kuhn contends that these procedures begin with anomalies that fly in the face of expectations. While the scientific revolution or specifically the paradigm shift for Kuhn requires a leap of faith or a complete

¹⁸ See P Hallward, Badiou: A Subject to Truth, op cit, p. 213 cf. A Badiou, Politics and Philosophy, 1997, 127

¹⁹ Ibid. pp. 210-214

²⁰ A Badiou, Infinite Thought, Continuum, London and New York, 2005, p. 43

conversion experience, for Lakatos, it requires "argument, counterargument and the process of struggle at work in the process of elaboration of a new scientific theory"²¹. In addition to Kuhn and Lakatos, Feyerabend's method or anti-method is the closest to the War Machine. Thus, while Hallward argues that Feyerabend's anti-method lacks fidelity, which is central to the truth procedure in the philosophy of Badiou, it is claimed here that it is in fact consistent with Badiou's militant discourse following Nietzsche and Sun-Tzu.²²

If anyone wanted to imagine a genius of culture, what would the latter be like? He would manipulate falsehood, force, the most ruthless self interest as his instruments so skilfully he could only be called an evil, demonic being; but his objectives, which here and there shine through will be great and good. He would be a centaur, half beast half man, with angel's wings attached to his head in addition²³

In Nietzsche, it is the method of the overman, while in Sun-Tzu it is the method of the warrior.

Settle on the best plan, exploit the dynamic within, develop it without, follow the advantage, and master opportunity: this is the dynamic. The

²¹ See P Hallward, Badiou: A Subject to Truth, op cit. p. 211, cf. Lakatos, I. Proofs and Refutations, 3, 142

²² Also Mao; see Mao Tse-Tung, On Guerilla Warfare, S B Griffith (trans.), B N Publishing, USA, 2007

²³ F Nietzsche, Human, All Too Human: A Book for Free Spirits, Cambridge University Press, Cambridge, 1996, p.115

way of war is deception. When able, feign inability; when deploying troops, appear not to be. When near, appear far; when far appear near: lure with bait; strike with chaos.²⁴

Central to Feyerabend's thesis on the anarchistic method is the pronouncement that

*the events, procedures and results that constitute science have no common structure; there are no elements that occur in every scientific investigation but are missing elsewhere. Concrete developments (such as the steady state of cosmologies and the discovery of the structure of DNA) have distinct features and can often explain why and how these features lead to success. But not every discovery can be accounted for in the same manner, and procedures that paid off in the past may create havoc when imposed on the future. Successful research does not obey general standards; it relies now on one trick, now on another; the moves that advance it and the standards that define what counts as an advance are not always known to the movers. [...]. A theory of science that devices standards and structural elements for *all* scientific activities and authorises them by reference to 'Reason' or 'Rationality' may impress outsiders - but is much too crude an instrument for the people on the spot, that is, for scientists facing some concrete research problem.*²⁵

²⁴ Sun-Tzu, *The Art of War*, Penguin Books, London, 2003, pp. 6-7

²⁵ P Feyerabend, Introduction to the Chinese Edition, in *Against Method*, Third Edition, Verso, London and New York, 1993, p. 1

The apparent anarchy in the method of scientific enquiry purported by Feyerabend is nothing short of a rigorous nomadic science or the War Machine.

People starting from different social backgrounds will approach the world in different ways and learn different things about it. People survived millennia before Western science arose; to do this they had to know their surroundings up to and including elements of astronomy. 'Several thousand Cuahuila Indians never exhausted the natural resources of a desert region in South California, in which today only a handful of white families manage to subsist. They lived in a land of plenty, for in this apparently barren territory, they were familiar with no less than sixty kinds of edible plants and twenty-eight others of narcotic, stimulant or medical properties'.²⁶

In his introduction to *Against Method*, Feyerabend advocates theoretical anarchy and opportunism as central to any form of revolutionary scientific practice. Citing, Hegel, Lenin and Einstein, he purports that while the method flies in the face of scientific education as we know it, its rigour resides in the mastery of all forms or aspects of social activity without exception, and regarding methodology, must be ready to pass from one form to another in the quickest and most unexpected manner²⁷. Accordingly, he cites Einstein, in stating that to any systematic epistemologist, he must appear as a type of unscrupulous

²⁶ Ibid. p. 3, cf. C. Levi-Strauss, *The Savage Mind*, 1966, pp. 4f

²⁷ Ibid. p. 10

opportunistic. Feyerabend is in fact closer to Badiou's model of radical scientist than Lakatos or Kuhn, given that he was a friend and contemporary of Lakatos, whose work derives from Kuhn. Further, as mentioned above with reference to Hegel and Lenin, in Lakatos there is an attestation to scientific revolution through struggle, and not nihilism. We may thus proceed with Badiou's sanctioning of physics as revolutionary scientific practice.

The War Machine as scientific methodology in physics is pertinent in instrument making, an example of which is, the creation of the cloud chamber and the subsequent development of particle physics as a new form of knowledge.

"The cloud chamber, by making the subvisible world visible"²⁸ was the instrument to begin bridging the divide between scientific realism, i.e. the claim that theoretical entities, (quarks, mesons, neutrinos, etc.) are real, and the dominant positivist position that only observable entities, the external material world (the sun, this book, etc.), are real.

Charles Thomas Reese Wilson, the creator of the cloud chamber, was not a particle physicist; he was, in the contemporary sense of the term, a

²⁸ P Galison, *Image and Logic: A Material Culture of Microphysics*, The University of Chicago Press, Chicago and London, 1997, p. 66

meteorologist: he analysed the formation and effects of weather phenomena: air, dust, fogs, clouds, rain, lightning and thunder, etc.

The Victorians were generally fascinated with the appearance of natural phenomena in the external world, and sought various means (artistic, poetic and otherwise) to express this fascination and reproduce these phenomena, and clouds were a central figure of fascination in this time. Wilson was equally fascinated by clouds, as by other natural phenomena, also, he had taken to photography and had become a quite adept nature photographer, but his work started after a stint at the Ben Nevis observatory. The meteorological effects he witnessed there (cloud formations, optical coronas etc.) left him “burning with desire” to reproduce those effects. From his notes, we have the following entries under Cloud Formations etc.:

1. Are the rings of corona and glory formed simultaneously in the same cloud, equal in radius? Try monochromatic light.
2. Conditions of formation. When best formed. (In dusty or tolerably pure air or in the presence of soluble substances.[])...²⁹

Other scientists had been working on similar problems, but it was Aitken who proved important for Wilson. Wilson's early instrument was based on the same

²⁹ Ibid. p. 91 cf. CWnb A1, preceding entries dated March 1895.

one (dust chamber)³⁰ Aitken had initiated at Ben Nevis³¹, however, his method varied crucially; while Aitken used a mixture of filtered and dusty air, Wilson used totally filtered air. This was a totally intuitive procedure, with questionable value judgement, because if Wilson wanted to make fogs,

Why was he removing the dust that Aitken had so painstakingly demonstrated to be the condensation nuclei? Surely, if Wilson's only motivation was to reproduce the natural phenomena of clouds he would have used ordinary air, not air that was specially prepared for laboratory purposes. This "artificial" aspect of his experiments signals a significant departure from the mimetic tradition in which his work was initially embedded.³²

Wilson's reason was to create the conditions necessary for "wonderful" optical effect: coronas and glories. Wilson's use of artificial laboratory conditions was for the purpose of dissecting nature, a strategy which he had learned from the analytic methods of the Cavendish Laboratory under J. J. Thomson and then Rutherford. About the same time, work had begun with the use of x-rays which Wilson adopted in his research and subsequently with Uranium, of course, at this time Wilson concern with clouds had developed from the problems of condensation to the expansion of negative and positively charged ions. After

³⁰ Ibid. p. 92

³¹ Ibid. cf. Wilson, "Formation of Cloud," *Proc. Camb. Phil. Soc.* 8 (1895): 306

³² Ibid. pp. 94-95

several modifications of the cloud chamber and several other experiments, Wilson abandoned the condensation method and the cloud chamber, and turned to electroscopes as the previous methods had failed to produce the phenomena he was pursuing. In all of this, the nature of Wilson's hypothesis was changing based on changing theoretical positions, modification of instruments results from experiments, and findings from other experts. He would later leave the conditions of the laboratory and return to nature. Following another series of experiments, he returned to the lab incorporating his previous knowledge of photography. What would emerge from this was that for the first time, it was possible to photograph tracks of x-rays and gamma rays. Wilson's new device would inspire a new approach in experimental physics, to the study of atomic and sub atomic particles. While others at the Cavendish Laboratory had become fascinated by this new particle physics, Wilson was undeterred in his search for an understanding of weather phenomena. His innovative research had spawned a new field of enquiry, while he remained faithful to his own objectives. His device "had come to dominate experimental enquiry into nuclear physics."³³ Wilson's cloud chamber was so successful, that it was the means of discovering new particles in the 1940s and 50s.

³³ Ibid. p. 120

Developed from two different traditions within experimental physics research, including intuitive approaches, and violently deviating from standard procedures, thereby negatively affecting them, in 1927, Wilson was awarded the Nobel Prize for his contribution to experimental physics.³⁴

Wilson's method can be related to the War Machine, with a mapping of various transformations of his research, and the manoeuvres from instrument making through theory and experiments, as his machinic phylum. His example sets the pace for what can broadly be termed creative research. Thus, the War Machine is the methodology for any creative research practice.

The ontology and epistemology of the War Machine as *creative practice* has been outlined above. Retaining the relationship with physics, the following section will outline the ontology of computation through the cybernetic/ ballistics research of Norbert Wiener, the War Machine in architecture, and the relationship of computation to architecture. It will begin with a brief history of ballistics as War Machine.

³⁴ Ibid. p. 140

2: 4.0 Deleuze, the War Machine and Cybernetics

*the ballistics stage extending from the point the projectile emerges from the muzzle to just before its impact with the target, involves a different kind of "machine": a dynamical system, consisting of a flying rigid body and the viscous media (whether water, air, etc.) it moves through. [...] the ballistics stage concerns the events influencing the trajectory of the missile in flight.*³⁵

*Ballistics singularities appear mostly as thresholds of speed, points at which the behaviour of flying objects changes abruptly. [...]. These critical points are not thresholds of absolute speed but of a special kind of "relative" speed, the speed of a moving body, relative to the viscosity of the medium...*³⁶

The understanding of the philosophical concepts proposed by Leibniz, and made popular in architecture through Deleuze (*The Fold*), has been greatly advanced by the science of cybernetics and information theory (particularly through Norbert Weiner and Manuel DeLanda), with regards to the qualitative and quantitative understanding of monads and ballistic singularities.

2: 4.1 Cybernetics

Cybernetics, one of the disciplines upon which computer science is based and upon which the computational turn in architecture depends, was established based on the ballistics developments of Norbert Weiner in the Second World

³⁵ M DeLanda, *War in the Age of Intelligent Machines*, Zone Books, New York, 1991, p. 35

³⁶ Ibid. pp. 36-37

War, the aim of which was to track and shoot down air borne anti-aircraft gunners. The great achievement of cybernetics as ballistics research was that for the first time, we witnessed the appearance of a human-machine couplet (human anti-aircraft gunner). While it had been possible to track (via command, control and communications) the projectile, velocity and acceleration of anti-aircraft gunners, it was not yet possible to track gunners in flight-combat conditions under the operation of a human agent. The 21st century has since witnessed the development of unmanned combat air vehicles and "missiles that calculate their own trajectories"³⁷.

Thus the War Machine as a singularity of infinite speed, based on the monads of Leibniz and the thesis of creative evolution in Bergson serves as a useful metaphor in the articulation of the scientific event. It is a pure becoming which is given form by its appropriation into state science. Its continuous curvature is given form through differential calculus, which in turn is appropriated and used to calculate ballistic trajectories.

³⁷ Ibid. p.35

2: 4.2 Ballistics

While the movement of a rigid body through a trajectory might appear straightforward, one must also consider the other factors affecting this rigid body: viscosity of the medium, turbulence (drag, air flow etc.), air resistance, etc. in addition to these, one must also consider the latent energy of the rigid body, known by a unique number called the Reynolds number. This number determines the threshold of speed for any given object (animate or inanimate), or the transformation of gait, movement etc. in living organisms. In addition, in the dynamic relationship between animate objects (beings) occurring in nature and other naturally occurring phenomena, (for example in the relationship between predator and prey, plants and animals, etc.), a complex 'machine', known under the Lotka-Volterra formula of natural ecology determines the methods of adaptation that the various organisms demonstrate, from the development of camouflage, to the development of claws, armour, visual acuity, stings, etc.

In missile ballistics (including aircrafts), which is the focus of this argument, the Reynolds number plays an important role when objects have to cross certain thresholds, e.g. sound barriers. At this point, shockwaves are sent through the entire body of the object, leading to crash or collapse; it is here that the complex

calculations involved in ballistics begin to show up. Naturally, the science of ballistics was the occupation of the military, and the methods of computation of differential calculus (differentiation and integration) required for these complex calculations were done by large teams of people in combination with certain machines. In the military's bid to make the venture more economical, the mechanisation of this process evolved. Essentially, the first computers were developed as machines to economically solve complex differential calculus.

By the Second World War, the military was faced with a new problem, the occurrence of fast and highly manoeuvrable aircrafts, which posed a problem for antiaircraft gunners, as they had to aim in front of the aircraft for the target to be hit. It was not until von Neumann and Wiener that a system was developed to track and bring down aircrafts in combat mode. This system heralded the development of the science cybernetics, one of the precursors to computer science. The cybernetic machine was based on control, communication and feedback, feedback being the important criteria in the development of what would be known as a servomechanism, or a fully integrated human-machine couplet.

The science of cybernetics, while appropriated by the military, had its origins in a nomad science or War Machine initiated by Wiener. In what follows, Wiener's development of cybernetics will be explored.

2: 4.3 Statistical and Probabilistic Distributions

Statistics is the science of distribution [...] concerned [...] with the various positions and velocities from which a physical system might start. In other words, under the Newtonian system the same physical laws apply to a variety of systems starting from a variety of momenta. The new statisticians put this point of view in a fresh light. They retained indeed the principle according to which certain systems may be distinguished from others by their total energy, but they rejected the supposition according to which systems with the same total energy may be clearly distinguished indefinitely and described forever by fixed causal laws.³⁸

The Newtonian system had dominated intellectual life between the 17th and 19th centuries, however, the work of two physicists Boltzmann in Germany and Gibbs in the United States changed this. Wiener argues that if there was a revolutionary physicist of the 20th century, that person was not Einstein,

³⁸ N Wiener, *The Human Use of Human Beings: Cybernetics and Society*, Da Capo Press, Boston, 1954, p. 8

Heisenberg or Planck, it was Gibbs³⁹. Accordingly, the revolution had the effect that physics no longer claimed “what will always happen, but what will happen with an overwhelming probability”⁴⁰. This was a great departure from the Newtonian world view that claimed everything in the universe happened according to a set of laws, upon which “the whole future depended strictly on the whole past”⁴¹. This statistical world view introduced earlier by Maxwell would be the paradigm shift reinforced in physics by Boltzmann and Gibbs⁴². The implication of this was that it was now possible to consider an incomplete and ever expanding universe of a multiple of other universes, but also, that each of these universes as energy systems displayed the probability through expansion towards an increase in entropy.

As entropy increases, the universe, and all closed systems in the universe, tend naturally to deteriorate and lose their distinctiveness, to move from the least to the most probable state, from a state of organisation and differentiation in which distinctions and forms exist, to a state of chaos and sameness. [...]. But while the universe as a whole, if indeed there is a whole universe, tends to run down, there are local enclaves whose direction seems opposed to that of the universe at large and in which there

³⁹ Ibid. p. 10

⁴⁰ Ibid.

⁴¹ Ibid. p. 7

⁴² Ibid. p. 8

is a limited and temporary tendency for organisation to increase. Life finds home in some of these enclaves.⁴³

Following Boltzmann and Gibbs, this was the manifesto upon which the science of cybernetics would be developed.⁴⁴

Cybernetics was developed from a combination of a theory of messages: the study of language as a method of controlling machinery and society, and the probabilistic theory; for the purpose of control and communication in a dynamical system. As mentioned previously, a dynamical system is one of various trajectories moving through a viscous medium. The aim of cybernetics would be to transmit messages between humans and machines, or machines and machines without loss of information, i.e. without losing information through increased entropy. The nature of the problem of communications and control Wiener traces back to Leibniz. In fact, according to Wiener, Leibniz was obsessed with the problem of communication, which in many ways included optics. As such it is little coincidence that Wiener refers to monads in the same way as Deleuze in his discussion on Leibniz.

When we learn that souls cannot be furnished with windows opening unto an outside, we must first, at the very least, include souls upstairs,

⁴³ Ibid. p. 12

⁴⁴ Ibid.

reasonable ones, who have ascended to the other level ('elevation'). It is the upper floor that has no windows. It is a dark room or chamber decorated only with a stretched canvas 'diversified by folds,' as if it were a living dermis.⁴⁵

Compare with Wiener's statement on Leibniz

Leibniz, in the meantime, saw the whole world as a collection of beings called "monads" whose activity consisted in the perception of one another on the basis of a pre-established harmony laid down by God, and it is fairly clear that he thought of this interaction largely in optical terms. Apart from this perception, the monads had no "windows," so that in his view all mechanical interaction really becomes nothing more than a subtle consequence of optical interaction.⁴⁶

So, both Wiener and Deleuze are talking about communications within dynamical systems, but in the above examples, with reference to optics. Also, we get a clue from Deleuze that communications is not restricted to optics but to several other ways specific to the organism or being.

Returning to cybernetics and entropy, Wiener's hypothesis is that life forms have the tendency to temporarily resist the natural tendency to increased entropy, and that they do this through feedback. As mentioned previously, the

⁴⁵ See G Deleuze, *The Fold: Leibniz and The Baroque*, Continuum, London and New York, 2006, p. 4

⁴⁶ N Wiener, *The Human Use of Human Beings: Cybernetics and Society*, op cit. p. 18

dynamical relationship between objects and their medium, or objects and their environments are determined by 'internal machines', known under different guises: genes, Reynolds numbers etc. Dawkins refers to this as the arms race⁴⁷ in nature. This arms race informs the weaponry of animals within the predator-prey system, is understood under the Lotka-Volterra formula and is based on feedback. It is this sort of feedback mechanism, the sending and receiving of messages within a system as part of a constructive evolution that Wiener has in mind. This constructive evolution is significantly quicker in humans, as we have the ability to create weapons. Cybernetics is thus another step in the evolutionary milieu, but the one that gave us computer science.

2: 5.0 Architecture and the Arms Race

*In physics, the arms race led to its evolution and bifurcation into various other fields of knowledge; whereas, the science of building evolved until the terminal moment when the mastery of skill by individual journeymen was subsumed under an imperial order to regulate the construction of buildings.*⁴⁸

In the first chapter (*Introduction: Two Books*), the nature of the research, the position of the researcher towards architecture, and the claim that architecture is

⁴⁷ See R Dawkins, *The Blind Watchmaker*, Penguin Book, London, 2006, pp. 169-194

⁴⁸ For the appropriation of the science of building by the state, see G Deleuze and F Guattari, *Capitalism and Schizophrenia: A Thousand Plateaus*, op cit, p. 406

an artifice of the science of building, were outlined. To this end, the nature of this artifice will be explored, against the historical development of the science of building from nomad science to royal science; and the relationship between this shift in architecture, and the *shifts in positions*, in the natural sciences.

Deleuze and Guattari claim that whereas the natural sciences undergo revolutionary changes (paradigm shifts) in their methods as a result of new insights, the shifts in the science of building have occurred as a result of distribution of central (State) authority.⁴⁹ Even in weapons manufacture, when appropriations like these occur, there are other counter developments, consistent within the arms race to develop superior weapon systems or counter systems: anti-missile jamming devices, longer range missiles etc.⁵⁰ However, in architecture, these movements have been exorcised; and where they exist, they are discussed in diminutive fashion⁵¹. The revolutionary procedures required

⁴⁹ "Let us return to the example of Gothic architecture for a reminder of how extensively the journeyman travelled, building cathedrals near and far, scattering construction sites across the land, drawing on an active and passive power (mobility and the strike) that was far from convenient for the State. The State's response was to take over management of the construction sites, merging all the divisions of labour in the supreme distinction between the intellectual and the manual, the theoretical and the practical, modelled upon the difference between "governors" and "governed." In the nomad sciences, as in the royal sciences, we find the existence of a "plane," but not all in the same way. The ground-level plane of the Gothic journeyman is opposed to the metric plane of the architect who is on paper and off site" Ibid. p. 406

⁵⁰ See R Dawkins, *The Blind Watchmaker*, op. cit. pp. 185-186

⁵¹ Architecture must be sustainable, eco-friendly, leave a minimal carbon foot-print, be safe to dwell in, sensitive to its cultural environment, etc. It can no longer be wasteful, with regards to

for the evolution of architecture (or building) have been subsumed or eliminated under political correctness, health and safety, and the so called rights of man⁵² and animals, and policies are in place to ensure that there are no violations of these rights⁵³, forgetting that a lot of what was learnt from these excessive forms of architecture served to increase and develop the knowledge of building and construction. This brings us to the essential difference in the object of physics and that of architecture: physics can concern itself with instrumentation and theoretical entities (e.g. the construction of the CERN Large Hadron Collider, the largest laboratory in the world)⁵⁴, in its quest for the new, while architecture remains content with building.

both human and material resources, as were the Egyptian and Mayan pyramids or the grand architectures of antiquity, and the revivals up till the Rococo.

⁵² See F Fukuyama, *Our Posthuman Future: Consequences of the Biotechnological Revolution*, Profile Books, London, 2003, pp. 105-128

⁵³ The issue here is that while classical/ historical forms of architecture embodied a certain form of violence, ritual, sacrificial, etc. contemporary forms don't. These sites of excess have been replaced by hotels, casinos, theme parks etc, which capitalism has rendered as big box architecture. Even certain architectural features are no longer possible due to health and safety regulations, with new forms developing based on the anxiety of security threats: but these cannot be termed revolutionary, they are strictly speaking, reactionary.

⁵⁴ The Large Hadron Collider is a nuclear particle accelerator, 127km in circumference spanning the Franco-Swiss border and located at almost 175m underground.

See <http://public.web.cern.ch/public/en/LHC/LHC-en.html>, last accessed at 18:25on 01March2010

2: 5.1 Cybernetics, Computation and Architecture

*..., feedback is a method of controlling a system by reinserting into it the results of its past performance.*⁵⁵

At the beginning of World War II, the comparative inefficiency of anti-aircraft fire made it necessary to introduce apparatus which would follow the position of an airplane, compute its distance, determine the length of time before a shell could reach it, and figure out where it would be at the end of that time. If the plane were able to take arbitrarily evasive action, no amount of skill would permit us to fill the as yet unknown motion of the plane between the time when the gun was fired and the time when the shell would arrive approximately at its goal. However, under many circumstances, the aviator either does not, or cannot, take arbitrary evasive action. He is limited by the fact that if he makes a rapid turn, centrifugal forces will render him unconscious; and by the other fact that the control mechanism of his plane and the course of instructions he has received practically force on him certain regular habits of control which show themselves even in his evasive action.⁵⁶

This is totally consistent with the War Machine in De Landa and the arms race in Dawkins. Cybernetics, by drawing upon natural systems of feedback is able to statistically determine what would otherwise seem arbitrary within a dynamical system.

⁵⁵ N Wiener, *The Human Use of Human Beings*, op cit, p. 61

⁵⁶ Ibid.

This figuring must include data which depend on our past statistical experience of airplanes of a given type under varying flight conditions. [...]. However, there is another stage of the control problem which may also be dealt with mechanically. The problem of determining the flight statistics of a plane from the actual observation of its flight, and then of transforming these into rules for controlling the gun, is itself a definite and mathematical one.⁵⁷

This is again consistent with the predator-prey example used by Dawkins, where the success of cheetah eating gazelle is determined by the known speed and movement of the gazelle, same for the gazelle not being eaten by cheetah, and in the subsequent development of their respective weapons systems⁵⁸. Similarly, the development of anti-aircraft fire and the success of gunning down particular types of aircrafts is based on the information (mechanical and statistical) received about the abilities of said aircrafts and aviators.

The information systems existing in nature are transmitted through synapses, neurons, etc. in cybernetics, the transmission is through the electrical hardware, radar, photoelectric cells, etc. In architecture, John Frazer in his development of Evolutionary Architecture followed similar principles, however, he was quick to accept that his adaptation was for innovative purposes, and not based on an

⁵⁷ Ibid. p. 62

⁵⁸ R Dawkins, *The Blind Watchmaker*, op cit., As already mentioned, while this occurs over generations in other animals and in nature, humans are able to rapidly speed up this process.

exact science. Essentially, his use of cybernetics in architecture was for the creation of artefacts. This is confused in his justification of an ecological approach to design (natural selection, morphogenesis, etc), because, as he was aware, Dawkins had given a full thesis on evolution in *The Blind Watchmaker*, published ten years after *The Selfish Gene*, to which Frazer refers for his simplistic dismissal⁵⁹. Frazer's work influenced a new breed of designers under the banner 'The Emergence and Design Group'⁶⁰, themselves claiming an ecological approach to design. While as Frazer claims, the appropriation of science, false or otherwise for artistic purposes is capable, and is indeed proven to produce novelty, it should not be given any scientific merit. This should not be confused with the anarchistic method of Feyerabend; with these practitioners, we have nihilism, similar to the random appropriation of Kuhn, not revolutionary practice. Badiou covers this in *Theory of the Subject*.

It is with Building Information Modelling (BIM) that Cybernetics meets architecture, as data from all the systems concerned in the production of a building (mechanical, electrical, structural engineering, cost accounting etc.) feed into the overall documentation, construction, performance and

⁵⁹ See J Frazer, *An Evolutionary Architecture*, Architectural Association, London, 1995, pp. 12-13

⁶⁰ See M Hensel and A Menges, *Morpho-Ecologies*, Architectural Association, London, 2006, also M Hensel and A Menges (eds.), *Versatility and Vicissitude: Performance in Morpho-Ecological Design*, Architectural Design, Vol. 78, No. 2, March/ April 2008

maintenance of the building over its life time. However, this method is in its early stages, but is already being evaluated⁶¹ and in the future, will doubtless form the subject of a different sort of thesis.

As such, in this thesis, emergence is dealt with ontologically as the War Machine, arms race or creative evolution; epistemologically and methodologically, as intercalation and the machinic phylum (phase transformations or morphogenesis); and as artist output, in the manifestation of an idea through art (literature and film).⁶² It is qualitatively and quantitatively a thesis on concrete becoming (see volume on *The Virtual*). The literature review which follows demonstrates how information theory is transformed into cinematic theory through Deleuze's reading of Bergson, and the final chapter uses the techniques of cinematic time (24fps) and montage, in its attempt to advance the avant-garde practice of computational architecture.

⁶¹ B Kolarevic and A M Malkawi, *Performative Architecture: Beyond Instrumentality*, Spon Press, London, 2005

⁶² The second volume of the thesis (*the virtual*) consists of a series of papers which explore architecture as a literary form; the emphasis of those papers is on an architecture which derives its materiality cinematically and literarily. Peg Rawes makes a similar reference to architecture in her analysis on the Plenum in the work of Leibniz.

2: 6.0 Conclusion: The War Machine and Intercalation

While physics deals with inanimate objects and its methodologies may often be anarchistic as has been demonstrated with Wilson and the Cloud Chamber, architecture as a science of building deals with humans and is subject to the rights of man and the sovereignty of the State. Therefore, the methodologies of physics may not be appropriate for the science of building. However, as the developments of weapons research has shown, the target of every ballistics system is a human, and ballistics is related directly to physics (quantum mechanics and statistics) and to the arms race in nature. We can thus infer that it is both a sustainable method of enquiry consistent with the evolutionary milieu and revolutionary in its ability to create new knowledge. Hence, it is possible to equate architecture with any other form of artifice, poetry, cinema, etc. art forms, fidelity to which can inform revolutionary practices and create new knowledge.

As stated previously, intercalation or traversing the machinic phylum involves making strategic and intuitive moves that transform the nature of the research and modifies the hypothesis and the methods of research. The machinic phylum is the trace of these transformations; it consists of various phase transformations (points of transformative change), crystallisation, morphogenesis etc. As a

methodology, it is a form of creative practice, is nomadic and is unscrupulously opportunistic. It is the method of creative evolution, it is the War Machine.

2: 6.1 Advocacy

Advocacy is a method of changing the viewing point of things; it does not allude to facts, but argues that by viewing the relationships between things, new knowledge emerges. Creswell claims that: "This method arose in the 1990s from individuals who felt that the positivist assumptions imposed structural laws and theories that did not fit" unobservable realities. It is grounded in the belief that research needs to be intertwined with politics and political agenda.⁶³ In architecture, advocacy occurred earlier than the nineties and was taken as a level of political participation, and not directly related to any specific agenda.

Outlined below are two of the key features of advocacy, as summarised Kemmis and Wilkinson⁶⁴:

1. Participatory action is recursive or dialectical, and is focused on bringing about change in practices. Thus, at the end of advocacy/ participatory studies, researchers advance an action agenda for change.

⁶³ J Creswell, *Research Design: Qualitative, Quantitative and Mixed Method Approaches*, Second Edition, Sage Publications, Thousand Oaks CA, London and New Delhi, 2003; also Mao Tse-Tung, *On Guerilla Warfare*, op cit.

⁶⁴ Ibid. p.11; Cf. Kemmis, S. & Wilkinson, M. (1998) *Participatory Action Research and The Study of Practice*

2. It is emancipatory in that it helps unshackle people from the constraints of irrational and unjust structures that limit self-development and self-determination. The aim of advocacy/ participatory studies is to create a political debate and discussion so that change will occur.

2: 6.2 Intercalated Advocacy

It is a (quasi-mathematical) form of creative/experimental practice, derived from thought experiments, participation through knowledge exchange and the intercalated method stated above. It is quasi-mathematical because it bases its procedures on theoretical assumptions (axioms), which it then follows through in mathematical/logical order; it is different from the algorithmic or empirically derived (positivist protocol) procedures popular to the avant-garde, as it is not the result of a rigid set of instructions, but of a logical and evolutionary procedure. It is analogous with the War Machine.

2: 6.3 Inflection: The Virtual

2: 6.3.1 Investigations

As stated above, a parallel enquiry is carried out within the thesis. The core explorations were from film and literature, and can be found in the attached volume. These explorations were in the form of academic papers, but together with the various material and computational practices of the avant-garde, and

the various theoretical positions explored (eroticism, virtuality, death, love, the other, etc.), they have inspired a deviation from seduction and technological production to an exploration of the erotic. Hence, this thesis attempts a contemporary presentation of the erotic from an architectural plane.

The general outcomes of the explorations were that architecture can be presented in any medium, but its conceptual and ontological distinction from building resides in its ability to inscribe *event*. In realistic terms the architectural *event* is political (mapping of territories, creation of boundaries and institutionalised symbols of power), while in theoretical terms, it concerns the general space of becoming; however, for concrete becoming, which is the exclusive domain of the human subject, the space of becoming is necessarily *evental*, and it can include any of the four *events* outlined by Badiou. Below is a list of the said papers, and the types of event they investigate:

1. The Camp: Political Event
2. The Haunt: Artistic Event (Disjunctive Synthesis/ Nonsense)
3. The Perfumery: Scientific/ Artistic Event (Instrument Making)
4. Four Twos: Amorous Event
5. The Circular Ruins: Artistic Event (Disjunctive Synthesis/ Nonsense)

2:6.3.2 From Seduction and Baudrillard to the Amorous Event and Eroticism

The move from seduction to the amorous encounter was consequent upon two things: the inadequacy of the thesis of Baudrillard to inscribe event and the inadequacy of Deleuze's thesis on becoming to accommodate concrete subjectivity. Therefore, based on the logic of the War Machine, and the Art of War, the most proximal to the idea of seduction was located in the strategy of love. Consequently, the erotic or more specifically eroticism is predicated upon the amorous encounter.

The form of the erotic is interesting, as it has its origins in literature; between written meditations, love letters and prose; generally, it exists as a form of resistance, finding its outlet solely in writing. In architecture, this form makes its appearance in the renaissance under the guise of the architectural treatise. However, wherever it appears, it combines the pedagogical with the transgressive.⁶⁵

⁶⁵ When Badiou discusses the amorous encounter, it is with relevance to Plato in the symposium; however, the more popular forms of love are discussed with relevance to sexual practices and conjugal relationships, as in *Phaedrus* and the architectural treatises of the Renaissance. See A Pérez Gómez, *Built upon Love: Architectural Longing after Ethics and Aesthetics*, The MIT Press, Cambridge MA and London, 2008; J-F de Bastide, *The Little House: An Architectural Seduction*, R El-Khoury (trans.), Princeton Architectural Press, New York, 1996; F Colonna,

Before the presentation of the erotic however, an overview of the state of experimental practice in architecture will be made, so as to position this thesis within the ever increasing body of architectural knowledge and to contribute to the understanding of the erotic in architecture already begun by Rodolphe el Khouri, Anthony Vidler and Alberto Pérez Gómez. The experimental architectures that will be considered are those within the wake of the Deleuzian influence in architecture, namely, the computational avant-garde; subsequently, the erotic will be considered as part of this evolutionary milieu.

Hypnerotomachia Poliphili: The Strife of Love in a Dream, J Godwin (trans.), Thames & Hudson, London, 2005; also M Foucault, The History of Sexuality, Vol. 2: The Use of Pleasure, Penguin Books, London, 1992; and Plato, Phaedrus, Penguin Classics, London, 2005

The writings of de Sade are rife with architectural references; *Philosophy in the Bedroom* should thus be included alongside *The Little House*, as both present a staging of the *Petite Maison* at once pedagogical and transgressive. See Marquis de Sade, *Philosophy in the Boudoir or, The Immoral Mentors*, J Neugroschel (ed.), Penguin Books, London, 2006; see also G Bataille, *Story of the Eye*, Penguin Books, London, 1982

Chapter 3

Literature Review and Critique of Existing Practices: *Virtual Bodies, Topological Form, Hypersurfaces, Worlds, and*

Morphogenesis

3: 1.0 Introduction

This chapter describes, through a review of existing literature, the transformation of the aesthetic and academic (avant-garde) practice of architecture through digital culture, from its origins in hypersurface theory to its emergence in bio-mimesis and algorithm based design. It builds upon the arguments on Information Theory in N Katherine Hayles' thesis on 'How We Became Posthuman', and on Stephen Perrella and Brian Massumi on Virtual Architecture, and Hypersurface Architecture - generally described as the interface (*liminal/topological space*) between media display/production and architectural surfaces, but also, the material (*technological*) production of the curvilinear form of the *objectile*; it discusses the nature of the *topological* turn and

what is meant by it in relation to the theories of Deleuze on *the fold*, on *crystallisations*¹ and on *becomings*.

It argues that while Deleuze articulates '*production*' through a technological paradigm, he makes a radical reduction of the human subject, by entering it into a relationship with objects (*crystallised forms*); thus, while technology and capitalist production create a new type of subject (the *superject*), this subject is reduced to a neuter, such that it is indistinguishable from any other mere object (tool, weapon, artefact or whatever), more specifically, it is reduced to a *point of view* (POV). Further, while he discusses the subject as a collective form (*multiplicity*) of production and resistance, his thesis is unable to account for the sovereignty of the individual subject in its proper *event* form. By implication, in the appropriation of the theories of Deleuze in architecture, the creation of worlds (architecture) is reduced to the creation of mere objects².

¹ *Crystallisation* is a term that occurs in both Baudrillard and Deleuze, as the coming to be, or actualisation of a virtual process. For Deleuze and Guattari, this requires taking on a 'skin', thus internalising the creative (virtual) process. For Baudrillard, this is the moment when the factors of production become mechanisms for consumption.

² Architecture as human enterprise, inscribes a politics of space (be it in the marking or creation of boundaries, the juridical inscription of collective bodies, or the control of such enterprise by sovereign power or the State). See Onabolu, T. The Camp Paradigm: Injustice to Becoming or Keeping Out the Madman. Architecture and Justice Conference, Lincoln, November 2009 (unpublished)

The chapter concludes by resorting to the thesis of Alain Badiou on the *logic of worlds*, arguing for architecture as 'event site and moment of encounter', reducing the architectural object or *hypersurface* to a banal object or sterile potentiality, which becomes productive³ only by inscription into the *event*. In its quest for seduction or the sensual, it establishes a premise for moving beyond the theories on *material production*, *crystallisation*, *emergence*, and the *augmentation of the body*, in the digital and computational practices of the avant-garde in architecture.

The literature, which falls generally under the posthumanities, is reviewed under the following general headings:

- Information Theory: N. Katherine Hayles, Marcos Novak and Asymptote
- Hypersurfaces: Perrella
- Experiencing the Virtual: Massumi, and Diller and Scofidio (Blur Pavilion)
- The Fold (*objectile-subjectile*) and Nonstandard Architecture: Deleuze and Bernard Cache

³ Productive here implies the radical production from a philosophical *event* through the antagonistic forces that bear in on it, e.g. class struggle in historical materialism, which creates the middle-class through an elimination of the bourgeoisie, or emancipatory procedures brought about through armed struggle.

- Creative Evolution: Bergson, Deleuze, Greg Lynn, and Rahim and Jamelle (CAP)
- Morphogenesis: DeLanda, Hensel and Menges (The Emergence and Design Group)

Following the deficiencies found from the literature review, the chapters which follow contextualise seduction in relation to Marx, Baudrillard, Deleuze and Badiou; subsequently abandoning it through recourse to event, in a quest for a parallel in the erotic.

3: 2.0 Information Theory and Architecture

3: 2.1 Virtual Bodies

In the rapidly emerging field of artificial life, computer programs are designed to allow “creatures” (that is, discreet packets of computer codes) to evolve spontaneously in directions the programmer may not have anticipated. The intent is to evolve the *capacity* to evolve. [...]. If one sees the universe as a composed essentially of information, it makes sense that these “creatures” are life *forms* because they have the form of life, that is, an information code. [...]. Information viewed as pattern and not tied to a particular instantiation is information free to travel across time and space. [...]. In the face of such a powerful dream, it can be a shock to remember that for information to exist, it must always be instantiated in a medium,

whether that medium is a page from the *Bell Laboratories Journal* on which Shannon's equations are printed, the computer-generated topological maps used by the Human Genome Project, or the cathode ray tube on which virtual worlds are imagined.⁴

Information theory sees *information* as (a thing, a theoretical entity) present in all systems, as a pattern, distinct from a presence, or as noise (or randomness). It sees both elements as complementary to each other (as they serve to define each other) and to the flow of information. Further, it sees *information* as more fundamental than (and distinct from) materiality⁵.

Shannon's theory defines information as a probability function with no dimensions, no materiality, and no necessary connection with meaning. It is a pattern, not a presence.⁶

Katherine Hayles posits an argument for information as embodied, i.e., inseparable from its medium of propagation; and defines information as "the probability distribution of the coding elements composing the message"⁷.

Complicit with this claim, she defines the virtual as the interpenetration of

⁴ N K Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*, The University of Chicago Press, Chicago and London, 1999, pp. 11-13

⁵ "Information is information, not matter or energy. No materialism which does not admit this can survive the present day." Ibid. p. 14, cf. Norbert Wiener, *Cybernetics; or, Control and Communication in the Animal and the Machine* (Cambridge: MIT Press, 1948), p. 132

⁶ N K Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*, op cit, p. 18

⁷ Ibid. p. 25

material objects with information (mobile phones, the internet, ATMs, etc.), thus the term virtual bodies. Hayles states that with computers, information passes through a coded medium and thus comes out as a hybrid of its medium, distinct from physical inscription as when striking a key from a traditional typewriter⁸.

However, in the universe of Hayles, information is a precursor to virtuality, which for her comprises the *encoded* space between a message, and a receiver; and, unlike the material medium of technologies of inscription (typewriters, etc.) or any other directly correlating device. Thus, for her, the digital space of binary functions is virtual space, as is the immaterial space of computer simulations. Especially significant for Hayles is the fact that in digital space, text can be manipulated in ways impossible in physical space, as such, it becomes image, (flickering-image) "an image drawn in a medium as fluid and changeable as water."⁹ Her concern however, is in the relationship between humans and information, whether as virtual bodies, or as autonomous agents.

Her wager is that the notion of an autonomous agent is unlikely, because it

⁸ "Typewriter keys are directly proportionate to the script they produce. One keystroke yields one letter; and striking the key harder produces a darker letter. The system lends itself to a signification model that links signifier to signified in direct correspondence, for there is a one-to-one relation between the key and the letter it produces. Moreover, the signifier itself is spatially discreet, durably inscribed, and flat." Ibid. p. 26.

Further, Hayles is very close to Deleuze and Bergson here; in fact it is possible to develop Hayles argument to a thesis on God, or of information being an artefact created out of the intangible morass of data

⁹ Ibid.

assumes that information passes through bodies unchanged, but that the actions of the human agent through feedback into encoded medium, transforms the nature of the information within any system irreversibly.

While information theory is not the concern of the thesis, it serves as a premise upon which to review some of the literature and practices of the computational avant-garde in architecture, specifically with regards the interfaces between surfaces and information, and between virtual space and surfaces. Further, information as artificial life provides a premise for evaluating notions of the posthuman.

3: 2.2 Transarchitectures

Amongst the earliest theorists of this shift is Marcos Novak, in his essay *Transarchitectures and Hypersurfaces*, he posits the notion of *transmodernity*, in order to discuss an architecture of it. Novak's transmodernity bears the mark of what Hayles terms *posthuman*, specifically of technologically augmented bodies (cyborgs etc.)¹⁰, which Hayles argues reduces the human subject to a composition of autonomous parts, as if the mind and body were separate¹¹.

¹⁰ M Novak, *Transarchitectures and Hypersurfaces: Operations of Transmodernity*, in *Hypersurface Architecture*, *Architectural Design*, Vol. 68 No. 5/6 May-June 1998, p. 85

¹¹ N K Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*, op cit, p. 3

Nevertheless, Novak's argument for transarchitectures is for an intermediary position between modernity and virtuality. This is either a shortcoming in his thinking about the virtual, or his inability to equate virtuality with architectural practice. This is understandable, as Novak's example of transarchitectures are the Freshwater and Saltwater Pavilions by Lars Spuybroek and Kas Oosterhuis¹², which according to Hayles classifies as a virtual body, as it engages with its users through a system of (informational) feedback. It is the disembodied form of architecture that he is unable to classify as architecture as in his Paracube¹³. This is paradoxical, because he is able to accept the technologically augmented human, which taken to its logical conclusion is the initial stage of the human mind which can be uploaded as information into a computer (recall that under this paradigm, the body is a mere accessory)¹⁴, but is unable to accept disembodied architectonics as architecture.

Similarly, in his essay *Eversion*, he advocates an inversion of the virtual into the actual, in a sort of midway between the liquidity of the virtual and the

¹² The Freshwater Pavilion is an interactive building, where the presence of visitors affects the program within the building, through direct interaction, as in the 'blob', which is a game for four people, or by passing through any of the sensors controlling wave movement, or through the touch sensors for wave movement. See L Spuybroek, *NOX: Machining Architecture*, Thames & Hudson, London, 2004, p. 26

¹³ M Novak, *Generative Principles for the Paracube*, in *Hypersurface Architecture*, op cit, pp. 90-92

¹⁴ N K Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*, op cit, p. 1

temporality of actual production¹⁵. Here again, while he anticipates the coming advances in technology, and its impacts on real space and architecture, he assumes that human consciousness under these conditions will remain unchanged. His logic is incapable of factoring the changes to what will be understood as human.¹⁶

The criticism of Novak is that his engagement is conservative, i.e., while he advocates a new form of architectonics, he is unwilling to accept the full implication of the posthuman, as such, his architecture suffers because it never becomes architecture, it posits itself as the underside or ugly side (alien, etc.) of architecture, it bears a negation 'trans' (other than, not) -architecture.

3:2.3 Virtual Architecture

A more rigorous approach to the use of information theory in architecture is taken up by Asymptote (Hani Rashid and Lise Anne Couture). In their work, information serves as a raw material for the production of architecture. While

¹⁵ M Novak, Eversion: Brushing Against Avatars, Aliens and Angels, in *Hypersurface Architecture II*, Architectural Design, Vol. 69 No. 9/10, 1999, pp. 72-76

¹⁶ An inference can be made to Nagel's essay *What is it like to be a Bat?*, where he states that in our general considerations of the bat, we think of the bat in human terms, as we are incapable of thinking as bats, because amongst other things, we have different perceptive devices, and altogether different mechanisms, hence different concepts of experience in the world. See T Nagel, *What is it like to be a Bat?* http://organizations.utep.edu/Portals/1475/nagel_bat.pdf, last accessed on 17 February 2010, at 03:42

they have an extensive portfolio, spanning almost two decades, the examples to be considered are from the turn of the millennium, specifically, three documented projects from their publication, Flux: Fluxspace 1.0 Installation, Virtual Reality Trading Floor (3DTF) for the New York Stock Exchange (NYSE), and the Virtual Guggenheim Museum.¹⁷

*Virtual architecture is an evolving discipline that results from the convergence of data mapping and simulation, digital form making, information "architecture," and virtual reality constructs and theory. [...]. Conventional architectures tend to be based on permanence and geometric certainty whereas virtual architecture utilizes digital technologies to augment real events, time, and space.*¹⁸

Fluxspace 1.0 is an interactive virtual installation. The difference between it and the Freshwater Pavilion is that it was actually digitally augmented. Sensors were attached to an actual constructed form which manipulated (through a process of feedback) the virtual architecture that was projected into physical space as the installation. The projected form was thus viewed as a continuously morphing animation. More radical than Fluxspace is the design for the NYSE. Following a rigorously posthuman paradigm, the 3DTF was designed as a system of data visualization, for the viewing and management of information in

¹⁷ H Rashid and L A Couture, Flux: Asymptote, Phaidon Press, London, 2002

¹⁸ Ibid. p. 50

three-dimension (3D) through a “manipulable digital interface.”¹⁹ Asymptote’s work here can be likened to the more current uses of programming languages (c++, MEL, VRML, etc.) in architecture, where these programming tools are used to create design environments and plug-ins to augment design software; e.g., in Autodesk Maya one can write a script using its programming language, which allows one to create tools which the programme does not originally have, in a sense, these can be likened to life forms within the information environment. Subsequently, these scripts are used to augment design efficiency as seen in use in *parametrics*. The importance of this breakthrough is that architecture becomes interlinked with computer programming, spawning an entire new discipline of information architecture and architecture. Another of Asymptote’s virtual architecture is the Guggenheim Virtual Museum (GVM), which is an internet based 3D museum. In their words, it destabilises popular understanding of architecture because it is primarily unrestrained by gravity. Further, “traditional notions of viewing and movement”²⁰ are destabilised. While the GVM has actual 3D form, it can be seen as an early precursor to the concept of social utility sites, because the concept of the agora is present in both.

¹⁹ Ibid.

²⁰ Ibid.

While Asymptote's work is innovative, it is still conservative, as it supports existing modes of production: their work is produced essentially as commodity.²¹

3: 3.0 Hypersurface Theory

It is very interesting that in Sephen Perrella's essay on hypersurface architecture, he opens with a statement, of the tendencies in theoretical architecture towards avoiding "vulgar capitalist programmes," and yet, before the end of the paragraph, he states that the departure from Derrida to the radical materialism in Deleuze was because the textual and language practice of deconstruction was unable to accommodate the material presence of architecture.²² He then continues his criticism of the practice to its similarities with the developments from the Enlightenment, by sanctioning the practice of Robert Venturi and Denise Scott Brown, and the propagation of media and sign culture. It seems paradoxical, that Perrella is playing the same game as the theorists he condemns, because the theory of signs he advocates whether through Venturi Scott Brown or through advertising is geared towards banal

²¹ It is important to note that information theory under Shannon, von Neumann, Wiener, etc. was an entity of its own; while it may have had its use it was proposed as a mechanism for understanding phenomena. Unlike a commodity, it had no purchaser or client in mind. Its appropriation by the military for use in ballistics is secondary.

²² S Perrella, *Hypersurface Theory: Architecture <Culture*, in *Hypersurface Architecture, Architectural Design*, op cit, p. 7

consumerism; what difference does it make whether his is in the proliferation of signs and the other theorists engage in the production of form?

Having a Heideggerian/Derridian background, I interpreted the media proliferation as an auto deconstruction; that is, the deconstruction of the capitalist subject through the very modes of production and technologies that proliferate due to the instrumentalism inherent in consumer economics.²³

His thesis on hypersurfaces is thus towards a practice where the proliferation of signs, meets virtual architecture, or more specifically topological architecture.

If one abides by the information theory model discussed by N Katherine Hayles, the difference between virtual bodies (architecture inclusive) and topological form becomes minimal; the reason is that virtuality as an informational construct is based on the proliferation of computer code as its medium; similarly, topological form is based on the proliferation of parameters (algorithms) that sanction its basic form, such that while the form may be manipulated, distorted or deformed, it retains an essential algorithmic trace. A typical example can be taken from a simple cube; in software like Autodesk Maya, the cube can be defined either as a NURBS (Non Uniform Rational B-Spline) primitive, a Polygon primitive, or as a Subdivision primitive. The nature

²³ Ibid.

of manipulations and deformations to the 'cube' depend thus on the parameters that define it; the cube in this regard is thus a topological object. Further, upon deforming the cube, if one goes into the algorithms that define it (its parameters), all of its initial attributes can be manipulated, thus changing what is assumed to be its present deformation. Topological form is thus informational in this regard; however, it only becomes a virtual body when it becomes the site of an active exchange of information.

Unfortunately for Perrela, his notion of topology is restricted to the interface between surface and electronic imagery, and he submits to the seduction of malleable form as topological.²⁴ However, from a 'representational' point of

²⁴ "Simultaneously in architectural design, an unprecedented plasticity of form deriving from computer technology is generating new explorations of form. As a result, there is a general topologising of volume-space into activated surfaces, as can be noticed in the work of leading and highly influential practitioners. This [...] impulse, from within 'proper' confines of elite practice of architecture, is the deconstruction of Platonics in architectural form into enfolded, radical deformations." Ibid. p. 11

This is not saying that malleable form cannot be topological; it simply asserts that for any form to be considered topological from an information theory perspective, it must bear a relationship to the same parameters/algorithms that define it within coded space. See K Terzidis, *Expressive Form: A Conceptual Approach to Computational Design*, Spon Press, London and New York, 2003; also *Algorithmic Architecture*, Architectural Press, Elsevier, Oxford and Burlington MA, 2006.

Of course, within theories of representation, topological form is different, as it encompasses the delimited space of perspective representation and optics; i.e., a mirror serves as topological space under this paradigm, but also the suggestion of exteriority within certain paintings and portraits however, the same rules apply: there is a relationship between one set of objects and the next, or between one set of attributes and the next, etc. A classic example is from Michel Foucault's analysis of Diego Velázquez's *Las Meninas*, where various elements of the composition refer to various other elements, until the viewer is directed to an unknown point outside the painting. See M Foucault, *The Order of Things*, Routledge Classics, London and

view, his thesis would be innovative, as it would have embraced form and mediation in a manner not achieved by Venturi Scott Brown. However, his Derridian leanings (by his own admission) render this negative, because Derrida as with Deleuze are amongst a series of continental philosophers who set out to challenge representation in all its ramifications.

3: 4.0 Experiencing the Virtual

Representation is thwarted in the philosophy of Deleuze and Guattari, which Brian Massumi invokes in his discussion on the virtual. In his essay, he revokes the phenomenological claim of consciousness being of something to Deleuze's response that "consciousness is something²⁵". Massumi's understanding of the virtual allows for a parallel reading of the virtual as both informational and cosmological, because in his references to Deleuze, he makes recourse not simply to process, potentiality and an evolutionary milieu, but also to instantiations of continuous variation from this milieu; in addition, he invokes the monadology of Leibniz. What he proceeds to question however, is the retention of the virtual in the standing form of the architectural object, the

New York, 2002, pp. 3-18; also G Deleuze, Foucault, Continuum, London and New York, 1999, pp. 39-101

²⁵ B Massumi, Sensing the Virtual, Building the Insensible, in *Hypersurface Architecture, Architectural Design*, op cit, p. 19, cf. Maurice Merleau-Ponty, *The Primacy of Perception*, James Edie (trans), Northwestern University Press (Evanston, III), 1964, p. 164

immediate answer will be that virtuality is retained in the environmental (natural) degradation of the object after it has emerged. In what appears to be a desperate attempt to merge virtuality with actual architectural production, Massumi directs his argument towards the optical and wave effects (dopplerings and fogs)²⁶ which affect our perceptions and experiences, and in turn transform us. In his reference to Bergson on how we are all beings of light, he commits a fatal flaw: we are beings of light insofar as our smallest particles are light waves (quanta) or monads²⁷, and not affects as he claims²⁸. Clearly, Massumi attributes becoming to affect, and with respect to architecture, the optical illusions (*trompe l'oeil* and anamorphosis) manifested in built form.

Further, Massumi states that the topological is not strictly restricted to computation, and is quick to dismiss information as a communicational feed. This is again an error, because as demonstrated by Hayles, information is distinct from communication. He continues to propose a strategy of *tunnelling*, which he distinguishes from communication, as a method for engaging with affect and its ability to immerse the individual in the virtual, with the dismissive suggestion that it would be something within the realm of science fiction.

²⁶ Ibid. pp. 20-21

²⁷ See G Deleuze, *The Fold, Leibniz and the Baroque*, Continuum, London, 2006

²⁸ Affect, it appears, is the equivalent of the Leibnizian Monad, as it perceives and transforms.

Unfortunately for Massumi, Diller and Scofidio designed and built the Blur Pavilion, which from Massumi's *affective* point of view is completely virtual; it is essentially formless, with a 'cloud' constituting its body, creating multiple optical effects. Also, from a view of information theory, Blur Pavilion is a virtual architecture, as it communicates directly with its environment through climatic sensors to create the cloud through feedback.

3: 4.1 Quantum Architecture

The concept of quantum architecture, inspired by the *Latent Utopias* exhibition and the theme for Documenta XI, 2002 (*Democracy Unrealized*) - a quest for democracy and accessibility to all, was introduced at the conference for "Development of Real and Virtual Space in The Age of Global Net held at Slovak University of Technology in Bratislava, Slovakia in September 2003."²⁹ Its aim was for an architecture which reflected the current state of the deterritorialised subject, i.e., the liberal humanist subject, the subject of posthumanism.

The proposal was for an interactive architecture that worked with technologies developed after information theory and computation, embracing the

²⁹ G Flachbart and P Weibel, Preface to *Disappearing Architecture: From Real to Virtual to Quantum*, Birkhäuser, Switzerland, 2005, p. 9

technological advances of quantum mechanics, it was perceived as architecture for the future.

Georg Flachbart's essay which introduced the concept of quantum architecture, set out to answer two questions:

1. Is there a possibility of accelerating the liberating process of decoding and deterritorializing, which capitalism unleashed, without falling again and again back into the archaism of generating codes, axiomatic, reterritorializations, identities, divans as anti-productive and anti-democratic instances par excellence?

The other question, a retort to Chantal Mouffe's conceit for a "vibrant agonistic public sphere": that "robust democratic life" needs the "possibility for antagonism to be turned into agonism;" (thinking with regards to *adversaries* instead of *enemies*) asks:

2. How can such a "vibrant agonistic public sphere" be created with the least investment of capital we can afford so that access to worldwide knowledge and, *eo ipso*, institutional power games be granted to all?³⁰

His answer was, that quantum technologies (superconductors etc.) could provide cheap sources of information processing, thus reducing intensive

³⁰ G Flachbart, *Disappearing Architecture _ From Real to Virtual to Quantum*, in *Disappearing Architecture: From Real to Virtual to Quantum*, op cit, pp. 12-13, cf. Chantal Mouffe, "For an Agonistic Public Sphere," in Okwui Enwezor et al. (eds.) "Democracy Unrealized," Hatje Cantz, Ostfildern 2002, p. 90

capital expenditure; further, that such technologies aid progress into the future of our technological evolution, instead of a regression into the past, such that as subjects, we will be ahead of the developments of computational technologies.³¹

While Flachbart's intentions might appear noble, the consequences are the similar if not the same as those of information theory, with regards the mechanisms of capital to reduce things to commodities, and the radical reduction of subjectivity to flows of data. Therefore, the answer to his first question is negative, because all it does neuter subjectivity at the expense of capital. Bataille and Caillois' positions can be invoked here, where only expenditure can sanction an agonistic public sphere³² or paroxysm. Consequently, the answer to the second question, based on the first is also negative, because there can be no antagonism if the subjects are passive, i.e., if there is no expenditure/excess.

What we are talking about here are large scale "instruments of displacement" - mixed reality environments of the post mechanical

³¹ "In other words, by designing and constructing a new type of architecture [...], in which real space [...] and virtual space [...] are coherently superposed, thus obeying the rules of quantum mechanics [...] rather than classical physics, the impact of materiality (including computer hardware) could exponentially be reduced and investment of capital minimized. Architecture as quantum object." *ibid.* p. 13

³² See G Bataille, *The Accursed Share, An Essay on General Economy*, Vol. 1: Consumption, Zone Books, New York, 2007; also R Caillois, *Man and the Sacred*, University of Illinois Press, Urbana and Chicago, 2001

paradigm 'Net', where "the virtual is seamlessly embedded in the physical". We must imagine these environments as an omnipresent super-computer of the beyond-the-desktop-era embedded in the world, a computer that ... does not exist, at least not as a single piece.³³

The consequence for architecture, despite its claims to the contrary, is consistent with the posthuman paradigm of information flow, the augmented body, and of feedback via coded space. Thus, Diller and Scofidio's work (Blur Pavilion) which features in the same publication demonstrates this passive agonism, through cyborg (augmented/coded body) encounters.

It is an invisible architecture that makes numerous parallel virtual worlds visible. It is an upside-down architecture. Architecture as pure infrastructure. Architecture as an enabling platform - for all.³⁴

3: 4.1.1 Blur Pavilion³⁵

Blur Pavilion was built for the Swiss Expo 2002, its main material envelope is a fog, made from channelling the water from Lake Neuchatel through several pressures nozzles, and coordinated with the environment, so that the fog retains a certain consistency regardless of the weather or environmental conditions.

³³ G Flachbart, *Disappearing Architecture _ From Real to Virtual to Quantum*, in *Disappearing Architecture: From Real to Virtual to Quantum*, op cit, p. 13, cf. William J Mitchell, same volume, p. 20

³⁴ Ibid. p. 14

³⁵ See E Diller and R Scofidio, *Blur: The Making of Nothing*, Harry N. Abrams, Inc., New York, 2002

Unlike entering a building, Blur is a habitable medium - one that is spaceless, formless, featureless, depthless, scaleless, massless, surfaceless and dimensionless.³⁶

A smart weather system reads the shifting climatic conditions of temperature, humidity, wind speed and direction, and processes the data in a central computer that regulates water pressure to an array of 31,500 nozzles.³⁷

The initial ambition for the pavilion was to incorporate, in addition to the simulated fog, a sort of matchmaking device which could communicate emotions and various nervous reactions, personal attractions, etc. between the visitors. The device was to be in the form of the prosthetic skin (raincoat), worn by visitors to the pavilion and channelled via a communications network. The intention was for the prosthetic skin to simulate reactions of goose pimples, blushing, etc., producing conditions "of anonymous intimacy". With a statistician, a fiction writer and a psychological profiler, a questionnaire was to be designed and analysed relative to each visitor. Each visitor was to be armed with a PDA into which their data would be logged. The prosthetic skin was to have various regions of colour transmission with ranges from cool to warm (luminous display of blue to orange) to replicate emotions, sonic transmission

³⁶ E Diller and R Scofidio, *Architecture as a Habitable Medium*, in *Disappearing Architecture: From Real to Virtual to Quantum*, op cit. p. 187

³⁷ Ibid. p. 188

from one visitor to the other if they had matching profiles following the data from the questionnaire, etc.³⁸

The proposal for the device was never realised, however, it remains relevant as a concept in discussing the posthuman, with respect to augmented bodies and information flow, albeit that the device was meant for fun.

Of course, this can create interference, as the prosthetic device becomes an extension of the person, and as people begin to seek pleasure in it, as with video games, until the prosthetic becomes indistinguishable from the person. Thus, Deleuze's concept of *the fold* is invoked, implying that the internal machinations of the individual affect its external manifestation, but are also affected by the effects of the manifestation; i.e., the 'new skin' becomes a living part of the individual and begins to affect and be affected by the individual in a continuum. By Deleuze's own admissions, *the fold* (which is also an inflection of continuous variation) can be mapped and produced mathematically through differential calculus, allowing for what was previously intangible to be given form. This he

³⁸ Ibid. p. 194

expresses, following the work of Bernard Cache as *objectile*: the technological production of surfaces and volumes of continuous variation.³⁹

The avant-garde latched on to the expressive concept of *the fold*, and a new form of architectural production following the mannerism of Bernard Cache began.

3: 5.0 The Fold (*objectile*) and Nonstandard Architecture

As above, the geometric concept of *the fold* is to capture dynamic movement through framing. What this means is that through vector analysis or differential calculus, actual movement can be mapped and frozen (framed) in time; like photography it is the capturing of an instant within a continuum. In architecture, its analogue has been achieved through recourse to animation software, where various deformations are imposed on an object or series of objects and allowed to run at any defined playback speed. However, because animation software is not designed for fabrication, designers such as Bernard Cache have modified the software, through the programming interface of the software, e.g., Maya Embedded Language (MEL) in Autodesk Maya, or through

³⁹ See G Deleuze, *The Fold, Leibniz and the Baroque*, op cit.

the creation of additional software, plug-ins,⁴⁰ to augment the main software, in order that fabrication become possible.

Cache reworks the fundamental geometry of architecture: substituting the square, circle triangle, with the frame vector and inflection, which have tremendous import through their generative dynamics, in contradistinction to the combinatory logic of Platonic forms.

Cache's fundamental argument that all form consists of either convex or concave curvature stems from his analysis of inflection – what Leibniz calls an 'ambiguous sign. For Cache, an inflection has the characteristics of a geometric undecidable, which works outwardly from its centre. This is defined as an 'intrinsic singularity'. The inflection works in a generative way, disseminating a geologic of openness and responsiveness to the potentials of an encounter.⁴¹

By Cache's own admission, the *objectile* is a different thing. It is not merely the result of framing and fabrication, but involves actual mathematical functions. In one of his examples (the textile museum)⁴², he mentions the use of mathematical functions (Penrose spatial structures) to the reduction of "knot and string

⁴⁰ Examples of plug-ins include Grasshopper and Paneling Tools, which were designed as parametric devices to augment the capacity of Rhinoceros (a 3D modeling software, not animation), itself a software originally designed as a plug-in to AutoCAD

⁴¹ S Perrella, Bernard Cache/ *Objectile: Topological Architecture and the Ambiguous Sign*, in *Hypersurface Architecture*, Architectural Design, op cit, p.66

⁴² Ibid. p. 69

theory," as well as calligraphic elements of Celtic and Arabic origins, as generative agents⁴³.

Cache's enterprise is motivated largely by philosophy, in what he calls a production of philosophy, with the claim, following Leibniz, "that any form, no matter how complex can be calculated."⁴⁴ He makes a further reduction that philosophy is a calculus of forms, for which computers are required, and for his calculus, he looks to the mathematician Joseph Fourier (1768-1830); stating that it was Fourier who discovered the mathematics to realise Leibniz's thesis, and with the advent of the computer, the Fast Fourier Transformation was realised.⁴⁵

*The problem of tiling a plane and, worse yet, that of space has no algorithmic solution due to appearance of nonperiodic elements.*⁴⁶

However, Cache also states that the function of computation is not to affirm the supremacy of reason and consciousness in humans, but their obverse. Further, that computation reveals the human as a mechanism of unreasonableness and unconsciousness following Bergson's argument on memory, that if the function

⁴³ This strategy influenced another generation of designers, e.g. Benjamin Aranda and Chris Lasch, thus in their publication, they mention various recipes (algorithms) and their mathematical derivations that may be employed in the generation of form. See B Aranda and C Lasch, *Tooling*, Pamphlet Architecture 27, Princeton Architectural Press, 2006

⁴⁴ B Cache, *Objectile: The Pursuit of Philosophy by Other Means?* *Hypersurface Architecture II*, *Architectural Design*, Vol. 69, no. 9-10, Profile 141, p.67

⁴⁵ *Ibid.*

⁴⁶ *Ibid.* p. 68

of consciousness is memory, then computation and algorithmic processing declares the emergence of the amnesiac posthuman or *homo cyberneticus*. But, he also states that there are many problems that algorithms are incapable of solving, e.g., tiling. The purpose of the statement is twofold. First, it is to declare that computers (artificial life, algorithms) cannot think, thus sanctioning innovation in organic life; the other, to declare that if protagonists of artificial life are correct, and organic life is the same, then the privilege given to consciousness is false, hence the amnesiac or deterritorialised subject; but, this subject is able to able to contract moments (frames) into fields of duration (perceptions), hence colour, thickness, emotions, etc.⁴⁷ Thus, matter cannot be isolated from memory, but is instead constituted as a fold: the virtual-actual, quantitative-qualitative continuum.

Telecommunications engineers are well aware that source coding is only half the job. Any image, no matter how complex, can certainly be sampled and reduced to a highly compressed digital series thanks to Fourier transformations, but the digital series still has to be carried by a physical support. The source coding is doubled by a channel coding. In fact, any text, any sound, any image may in future be reduced to a digital series, but a bit stream - a series of ones and zeros - is nothing until it is recomposed in or on a given support, at a pre-determined clock time. This is how

⁴⁷ Ibid.

digital series can effectively become a sound in a stereophonic membrane, or an image on a video screen; this is how the digital verb becomes analogue flesh.⁴⁸

How does number become sound or image? This process is impossible to understand if matter itself does not in turn become the object of the kind of distinction applied to memory.⁴⁹

Matter is thus [...] that by which everything is given, reducible to pure quantity, [...], as well as that which constitutes the most relaxed membrane, the qualitative residue without which quantity does not exist. It is the minimal colour without which there is neither black nor any white, the fundamental noise without which there is no signal.⁵⁰

On the production of form through mathematical means, Cache sums up:

Following Kandinsky, we take Leibniz's affirmation that all forms are computable at its word. And, the only means needed to achieve our ends are those prescribed by Fourier, that is, series of series of trigonometric functions.

To design volumes, we use whole periodicities that cause surfaces to curl upon themselves. The first stage thus consists in devising mathematical models, which allow for declining infinite kinds of possibilities. In order to approach these 'worlds' whose functions are comprised of as many dimensions as parameters, we have developed exploratory tools,

⁴⁸ Ibid.

⁴⁹ Ibid.

⁵⁰ Ibid, p.69

generating series of video images that correspond to trajectories running through these multi-dimensional universes. Objects generated by this process initially resemble still-frames from video footage.⁵¹

While Cache's argument, following Bergson and Deleuze is convincing, it is simplistic in that it considers matter as a constructive evolutionary occurrence, as indicated in the machinic phylum and war machine of Deleuze and Guattari, Derrida, Dawkins, and DeLanda.⁵² As such, life (organic/inorganic) is reducible to occurrences, battles for survival, the arms race etc. hence the development of the concept of morphogenesis: a development from the natural selection model of Darwin. The problem of the natural selection model is highlighted in Deleuze and Guattari's thesis, where the war machine is included (in a state of belonging) with the State, and in Dawkins, where constructive evolution occurs within a particular eco-system⁵³. To resolve the impasse of the multiplicity within the dialectic of *being* (the coming to being of a multiplicity) the

⁵¹ Ibid.

⁵² See G Deleuze and F Guattari, 1227: Treatise on Nomadology - The War Machine, in Capitalism and Schizophrenia: A Thousand Plateaus, Continuum, London and New York, 2004, pp. 387-467; J Derrida, The Beast & the Sovereign Vol. 1, The University of Chicago Press, Chicago and London, 2009; R Dawkins, Constructive Evolution, in The Blind Watchmaker, Penguin Books, London, 2006, pp. 169-193; M DeLanda, Collision Course, in War in the Age of Intelligent Machines, Zone Books, New York, 1991, pp. 11-195, also Intensive Science and Virtual Philosophy, Continuum, London and New York, 2005

⁵³ The closest example is with phylogeny, which maps the possible evolution and emergence of particular species, but does not account for *events*, extinctions, and external influences. (Workshop on Phylogeny, held at InSpace, University of Edinburgh, and the Royal Botanical Gardens Edinburgh, 19-21 February 2010)

philosopher Alain Badiou introduces the concept of '*the non-being of being*', the black hole or void, which he names *event*⁵⁴ i.e., when being belongs to itself, indicating a rupture of cataclysmic proportions, as in when a meteor hits the earth and completely transforms the ecosystem as it is known, e.g., the event of the extinction of the dinosaur; or with a sudden external invasion with weapons or political structures previously unknown e.g., colonisation or the atomic bomb.⁵⁵

Thus, if Deleuze and Cache assert *the fold* as determination of the object, it is *event* (as pure exteriority to a situation), and not morphogenesis or evolution, which sanctions its material becoming. However, this is not true in all cases; which is why Badiou asserts that the subject (the product of an *event*) is rare. The war machine of DeLanda, and Deleuze and Guattari is thus negative as it does not produce subjects, but objects under the domination of law, or beings for

⁵⁴ A Badiou, *Being and Event*, Continuum, London and New York, 2005

⁵⁵ Hallward rejects the claim that a foreign invasion can count as *event* because it does not belong to the situation. P Hallward, *Badiou: A Subject to Truth*, University of Minnesota Press, Minneapolis and London, 2003, p. 116. However, considering the universe as a whole, which is the domain of meteors and astronomy, or the situation of global capital, it can be asserted that such *events* belong to those situations. Recall Mao Zedong's "cosmic perspective" on the atomic bomb. See S Žižek, *In Defense of Lost Causes*, Verso, London and New York, 2008, p. 187; also S Žižek, Badiou: Notes from an Ongoing Debate, in *International Journal of Zizek Studies*, <http://www.lacan.com/zizou.htm>, last accessed at 10:21 on 04 March 2010

death.⁵⁶ Nevertheless, due to the impact of Deleuze on architecture, *the fold* will be reviewed below, albeit through Bergson's thesis on creative evolution.

3: 6.0 Creative Evolution

The universe *endures*. The more we study the nature of time, the more we shall comprehend that duration means invention, the creation of forms, the continual elaboration of the absolutely new.⁵⁷

Bergson's thought is about organic life forms, as distinct from *objects*, due to their quest for isolation and individuality from a dynamic multiple (evolution, cellular organisation, reproduction, etc.). For him, the only inorganic life form that is comparable is the "totality of the material universe," albeit that the living being is observable and the "whole of the universe" is constructed by thought.⁵⁸ Nevertheless, the primary concern here is the premise upon which information theory meets evolutionary theory, expressed in the statement below:

The present state of an unorganised body depends exclusively on what happened at the previous instant; and likewise the position of the material points of a system is defined and isolated by science is defined by the position of the these same points immediately before. In other words, the

⁵⁶ See P Hallward, Badiou: A Subject to Truth, op cit; also A Badiou, Ethics: An Essay on the Understanding of Evil, Verso, London and New York, 2001

⁵⁷ H Bergson, The Endurance of Life, in Creative Evolution, in Henri Bergson: Key Writings, K A Pearson and J Mullarkey (eds.), Continuum, New York and London, 2002, p. 176

⁵⁸ Ibid.

laws that govern unorganised matter are expressible, in principle, by differential equations, by which time (in the sense in which the mathematicians take this word) would play the role of an independent variable.⁵⁹

Bergson's thesis on evolution is built upon his previous thesis on *matter and memory*. It claims, that organic life is constituted by the totality of its previous memory, and that while life forms appear static upon observation, all that happens is that the psyche fixes on instants which it does not vary until a significant change becomes apparent, including the more specific metamorphosis in pupa and larva, or the age based changes at puberty and menopause. Further, that every life form must engage in two antagonistic forces of the universe: ascent and decent; one the inwardly regressive force of individuation (contraction)⁶⁰, and the other the reproductive force of expansion. He states that fundamental to evolution is the principle of *endurance*, (predicated upon the two antagonisms) in which everything that exists *endures* (and even when the environment is altered, passivity can only be temporary). Further, that where these antagonistic forces not present, time would stand still, i.e., there would be no duration, hence no evolution.

⁵⁹ Ibid. p. 181

⁶⁰ See also S Žižek, *The Indivisible Remainder: On Schelling and Related Matters*, Verso London and New York, 2007

As stated earlier, the mathematical expression of artificial life forms (inorganic matter, thought experiments) according to Bergson, resides in differential calculus, which varies in complexity from the basic expression of an instant, $\delta x/\delta t$, to the more complex computations of the universe; but he resists extending mathematical reductions to organic *creation* (the evolutionary phenomena which properly constitute life⁶¹) as a whole.

As for the idea that a living body might be treated by some superhuman calculator in the same mathematical way as our solar system, this has gradually arisen from a metaphysic which has taken a more precise form since the physical discoveries of Galileo, but which, [...], was always the natural metaphysic of the human mind. Its apparent clearness, our impatient desire to find it true, the enthusiasm with which so many excellent minds accept it without proof - all seductions, in short, that it exercises on our own thought, should put us on our guard against it. The attraction it has for us proves well enough that it gives satisfaction to an innate inclination.⁶²

In organic life, he claims that it is impossible to articulate one instant which precedes the next; thus, it is impossible to reduce organic life to the laws of calculus, because while mathematics deals with time as an abstraction, time for

⁶¹ Ibid. p. 182

⁶² Ibid. Francis Fukuyama expresses similar sympathies in his thesis on the biotechnological revolution. See F Fukuyama, *Our Posthuman Future: Consequences of the Biotechnology Revolution*, Profile Books, London, 2003

organic life is concrete duration,⁶³ and the evolution of consciousness in a previous-present continuum, "incommensurable with its antecedents."⁶⁴

Science can work only on what is supposed to repeat itself - that is to say, on what is withdrawn, by hypothesis, from the action of real time. Anything that is irreducible and irreversible in the successive moments of a history eludes science.⁶⁵

He concludes his thesis on endurance with the affirmation that science is incapable of informing evolution and that it is the role of philosophy to resist science and the natural tendency to reason. Within his thesis therefore, scientific models (physics and mathematics) or what he later terms mechanistic explanations (deterministic models wrapping the past and the future into the present, Laplace and Fourier transformations, etc.),⁶⁶ as with information theory

⁶³ The mathematical abstraction of artificial life is what Deleuze and Badiou will later take on as the false movement of cinema, a system which reduces duration to the abstraction of twenty-four frames per second (24fps). See G Deleuze, *Cinema 1: The Movement-Image*, Continuum, London, 2005; also, A Badiou, *The False Movements of Cinema*, in *Handbook of Inaesthetics*, University of Stanford Press, Stanford CA, 2005, pp. 78-88

⁶⁴ H Bergson, *The Endurance of Life*, in *Creative Evolution*, in *Henri Bergson: Key Writings*, op cit, p. 184

⁶⁵ Ibid. p. 185

⁶⁶ "The essence of mechanical explanation, in fact, is to regard the future and past as calculable functions of the present, and thus to claim that *all is given*. On this hypothesis, past, present, and future would be open at a glance to a superhuman intellect capable of making the calculation. Indeed, the scientists who have believed in the universality and perfect objectiveness of mechanical explanations have, consciously or unconsciously, acted on a hypothesis of this kind. Laplace formulated it with the greatest precision: 'An intellect which at a given instant knew all the forces with which nature is animated, and the respective situations of the beings that compose nature - supposing the said intellect were vast enough were vast enough to subject these data to analysis - would embrace in the same formula the motions of the greatest bodies in

can only articulate artificial life. Bergson thus resists radical mechanism (mechanistic explanations) in favour of Leibniz and radical finalism, claiming that finalism is very flexible, as it is rife with inflections will be indefinitely transformable.

The doctrine of final causes, [...], will never be definitely refuted. If one form of it be put aside, it will take another. Its principle which is essentially psychological is very flexible. It is so extensible, and thereby so comprehensive, that one accepts something of it as soon as one rejects pure mechanism.⁶⁷

Within the Leibnizian thesis, it becomes possible to envision an organism composed of other individual organisms. But Bergson is not content with radical finalism as a whole. While he contends that his thesis is closer to it than it is to mechanistic explanations, he is keen to demonstrate where it differs. Thus, while Leibniz's individual organisms (monads) are harmonious and privileged (the

the universe and those of the slightest atom: nothing would be uncertain for it, and the future, like the past, would be present to its eyes.'" Ibid. Mechanism and Finalism, in *Creative Evolution*, in Henri Bergson: Key Writings, op cit, p. 187, cf. Laplace, *Introduction à la théorie analytique des probabilités* (*Oeuvres complètes*, vol. vii., Paris, 1886, p. vi.). And Du Bois-Reymond: 'We can imagine the knowledge of nature arrived at a point where the universal process of the world might be represented by a single mathematical formula, by one immense system of simultaneous differential equations, from which could be deduced, for each moment, the position, direction, and velocity of every atom of the world.' Ibid. pp. 187-188, cf. Du Bois-Reymond, *Über die Grenzen des Naturerkennens*, Leipzig, 1892

⁶⁷ Ibid. pp. 188-189

folds in the soul that sing the glory of God)⁶⁸, Bergson's organisms are neither in harmony nor disharmony, neither privileged nor struggling, they adapt to their environment by creating machines, they reply.⁶⁹ But, in order for the organism to reply, Bergson posits that it has to anticipate all probable actions, and for this it requires a visual apparatus. The popular consensus is thus that, for Bergson, evolution is anticipated through the cinematographic model⁷⁰. However, this can be contested in view of the research of Norbert Wiener, John von Neumann, etc. and the development of cybernetics, because, the cybernetic model was precisely probabilistic, based on both mathematical and observational patterns (calculating and tracking projectiles, the invention of anti-aircraft gunners, drones, etc.). Thus Bergson's thesis can be considered as a contribution to information theory. Deleuze however, inverts Bergson's thesis, *similar to Badiou's inversion of Plato's representational forms in the allegory of the cave*⁷¹, reducing his thought on the visual apparatus to cinema, and rendering information as its analogue.

⁶⁸ Ibid. p. 191; see also G Deleuze, *The Fold: Leibniz and the Baroque*, op cit, p. 3; and G W Leibniz, *The Monadology*, in *Discourses on Metaphysics and The Monadology*, op cit., §61, p. 57

⁶⁹ H Bergson, *Life as Creative Change*, in *Creative Evolution*, in *Henri Bergson: Key Writings* op cit, 195-196

⁷⁰ See G Deleuze, *Cinema 1: The Movement-Image*, op cit; also, K A Pearson and J Mullarkey (eds.), *Henri Bergson: Key Writings*, op cit.

⁷¹ With Badiou, however, what is put in question is the *new image*, and the idea it holds, as against the mechanism of presentation, which is the priority for Deleuze. See A Badiou, *The False Movements of Cinema*, in *Handbook of Inaesthetics*, op cit

Bergson's evolutionary theory proposed two considerations of time: abstract time and real/concrete time; one related movement, the other to duration, with movement occurring from one instant to the next, as an expression of abstract time and thought, and duration expressing the real time of endurance and evolution. In the thought of Deleuze however, movement is contained within duration, and not separate from it. Thus, what appears as a perversion of Bergson's thought in Deleuze can be taken as the impact of a *point of view*, where the camera itself, speaks about cinema. In his reading of Bergson therefore, Deleuze extends the thesis on constructive evolution, through a *reduction to or development of* the abstract time of cinema (a combination of the mechanistic and adaptive model after finalism), or what he termed the *false movement* of cinema.

This thesis of Deleuze on cinema, following his appropriation of Bergson, spawned two separate approaches within the architectural avant-garde: animation, as a consequence of cinema and the thesis on movement, and morphogenesis as a consequence of adaptation and *the fold*. Specific concepts are discussed in the subsection below (6.1) as precursors to the adoption of animation techniques in avant-garde architecture, while morphogenesis forms the subject of the next section (7.0).

3: 6.1 The Frame and the Crystal

*We do not wish to say that there will no longer be any movement, but that - just as happened a very long time ago in philosophy - a reversal has happened in the movement-time relationship; it is no longer time which is related to movement, it is the anomalies of movement which are dependent on time.*⁷²

Deleuze begins his discussion on cinema with an inversion of Bergson's thesis on evolution, in the manner of *taking the philosopher from the back*. Thus, what was arguably a thesis on information and evolution becomes a thesis on movement as a consequence of cinematic time. This technique of overturning principles can be taken as part of the genius of Deleuze. However, in so doing, the thesis on evolution becomes a thesis on narration. But, it is a special type of narration, as it raises a fundamental question of Bergson's thesis. Deleuze posits that *creative evolution*, while claiming to discuss duration, commits an omission, by assuming a closed system, or a whole. Deleuze disagrees with him, claiming that in his omission, Bergson reduces concrete time to abstract time, because the whole is also in duration, i.e., it endures and is not closed, as in Bergson's analogy of waiting for the sugar to dissolve in the glass of water.

⁷² G Deleuze, *Cinema 1: The Movement-Image*, op cit., Preface to the English Edition, p. xi

With this, Deleuze introduces concepts like *the whole of film, the set and the frame, montage, organic and crystalline narration*, etc. He discusses the relationships between the virtual and the actual as manifestations in cinema, but also as created by cinema. He speaks of the passivity of the image and the emptiness or fullness of the set (both in set theory terms, and in cinematic terms: props, figures, etc.), but also of the forces acting towards the formation of the image, with the image in return acting upon its forces of production. Thus in his discussion on neo-realism, he explains how various directors manipulate time sequences through manipulations of camera angles or with creation of the false sequence. He attributes to the false the same privilege as thought experiments, in their ability to resolve paradoxical situations. Cinema is thus for him the false art of situation, it is pure artifice. Consequently, in discussing things like the frame, unlike *the fold*, where the frame implies a static moment, or immobile section, in cinema, the frame is a set, a completely mobile section (cut) of the film. Similarly, the crystal is the movement-image staring out of the scene, and not a passive object.⁷³

In architecture however, these discussions are taken as metaphors and applied experimentally to the practice of building, as such, because there is no direct

⁷³ See G Deleuze, *Cinema 2: The Time-Image*, Continuum, London, 2005

correlation between artifice and building, the explanations fail; nonetheless, the forms generated by these abstractions are innovative, as are demonstrated by Greg Lynn; following which is the practice of Ali Rahim and Hina Jamelle, Contemporary Architecture Practice (CAP) with their extension of animation techniques, due to developments in the software of dynamics, into what they term catalytic formations.

3: 6.1.1 Animate Form

In Animate form, Greg Lynn outlines a theory of animation that resembles Bergson's constructive evolution. For Lynn, animation is not simply the movement of objects in a framed sequence, but an emergence of form within a fluid medium in time. He uses the analogy of the hull and sails of a sailboat, and how their shapes are determined by the various vectors (wind direction, viscosity of air and water, etc) acting upon them. He states that architecture is one of the last professions still dependent on static methods of design, and suggests that architects begin to work with potentialities in their generation of form. The first problem with his analogy, is that the design of ships is based on their requirement for efficiency, it is as in ballistics based on the need of the ship and its crew to reach a set destination within a certain time, to sail taking advantage of the wind, and to position itself in equilibrium with water (saline or

fresh) and air. The science of building already does that, so Lynn might be making a case for a return to building science.

When he begins his discussion on animation, he likens it to the various phase transitions that occur during the evolutionary process. i.e., using the dynamic applications of animation software like Autodesk Maya, one can work with force-fields and vectors, and evolve forms which can subsequently be modelled and animated using skeletal systems for topological transformations. As a method of form generation, Lynn's use of vectors is an accurate translation of Deleuze's objectile, where the object emerges or crystallises out of a system of natural forces and the objects internal constitution (in this case its topological attributes). However, architecture is beyond form, as its environmental milieu consists of factors that are essentially human, such as politics, love etc; as such it is insufficient to remain within the realm of the object. Thus, while *animate form* may apply to furniture as in the case of Bernard Cache, or toys, it is insufficient for architecture; as architecture is more than a tableau of containment.

Finally, Lynn dismisses the cinematic model popular in architecture, as a system of mimetically simulating movement as "the multiplication and sequencing of

static snapshots”⁷⁴. For him, the movement-image of Deleuze is far more rigorous than a reduction to stills and snapshots. In this regard, Lynn is the closest in his generation of the computational avant-garde to the reality of *the fold*. His thesis on animate form can be seen as the beginning of a series of explorations into architecture and cinema, but also architecture as a narrative form beyond building.

3: 6.1.2 Catalytic Formations

‘Catalytic formations’ is a design method developed by CAP, based on developments in the animation software Autodesk Maya. In this respect, it is a method derived through computation, and as with Lynn, through animation. However, unlike Lynn who works with topological forms, inverse kinematics and genetic algorithms, CAP works with the particle dynamics application in Autodesk Maya. Their intention is to inspire innovative practice and cultural change in design methods, and not as a manifesto. Thus, they propose two strategies: the first, generative techniques, is based on algorithms and character animation techniques (inverse kinematics, etc.), the other, transformational techniques, is based on deformations of topological forms, or morphing.

⁷⁴ G Lynn, *Animate Form*, Princeton Architectural Press, New York, 1999, p. 11; Lynn’s criticism is regarding static shots, or what Deleuze names immobile sections. See G Deleuze, *Cinema 1: The Movement-Image*, op cit.

The design work featured in this thesis is based on a combination of dynamic and transformational systems, but specifically through the use of the particle dynamics application and deformation techniques in Autodesk Maya.

3: 7.0 Morphogenesis

Morphogenesis can be broadly defined as the actualisation of ideal forms, through information and feedback (like any other form of emergence, it is a historical process). It is analogous to ideal genesis, which is not processed through *encoded* space or feedback, but is *axiomatic* or belief based.⁷⁵ Therefore, objectiles and organic life forms are morphogenetic, while platonic solids are ideational. While morphogenesis is central to Leibniz, Bergson and Deleuze, Manuel DeLanda articulates it in a form that is graspable in contemporary

⁷⁵ There is a general misunderstanding in the use of axioms, especially in the philosophy of Badiou and his recourse to Plato. Badiou posits that philosophy as with mathematics and statistical physics are axiom based, meaning that their theories are entirely propositional. He argues that as with Plato, the purpose of philosophy is the creation of other worlds, just as mathematics creates abstract (propositional) universes through set theory. Therefore there cannot be a universal expression of forms (continuous curvatures as expressed by differential calculus, etc.), beyond the formless (the nothing, \emptyset), i.e., the dynamic multiple, equated as the null set. Thus, in the thought of Badiou, there is no privileging of form, whether platonic or organic; what is important is disinterested choice, as the forms are irrelevant in themselves. Similarly, Deleuze's ontology is indifferent to form (the purpose of his thesis is to reveal the dynamic and energetic processes which are central to objects, forms, etc.) but, the difference between his and the ontology of Badiou, is that for Deleuze, the dynamic multiple is an entity expressible through differential calculus, while for Badiou, the dynamic multiple is the null set, it is inexpressible. See A Badiou, *Being and Event*, Continuum, London and New York, 2005; also, A Badiou, *Deleuze: The Clamor of Being*, *Theory Out of Bounds*, Vol. 16, University of Minnesota Press, Minneapolis and London, 2000, and M DeLanda, *Intensive Science and Virtual Philosophy*, Continuum, London and New York, 2005

times. In his thesis on the ontology of Deleuze, DeLanda begins by stating that the distinguishing factor in the philosophy of Deleuze is the concept of *multiplicities*; the reason being that Deleuze sought to remove his philosophy from *essentialism*, i.e., the philosophy which states that everything that exists is composed of certain specific elements, e.g. in the *Timaeus*, Plato states that all matter is composed of earth, air, fire and water; or *idealism*, which states that everything that exists in the physical world is a replica of a transcendental original. Thus, resisting essentialism, Deleuze proposes that everything which exists materially comes into being through a process of natural selection, adaptation, and reproductive isolation.⁷⁶ But, nor is morphogenesis restricted to organic matter (animal and plant species), elementary particles and inorganic matter, but also social groups, are also included. Hence, what is important in morphogenesis is not so much the form of matter (material organisation), but the historical process of its organisation. However, the historical processes themselves are prone to essentialist reduction, hence his principle of *disjunctive synthesis*⁷⁷ or immanent multiplicities (folds within folds): differential spaces of indefinite possibilities.

⁷⁶ M DeLanda, *Intensive Science and Virtual Philosophy*, op cit, p. 10

⁷⁷ See G Deleuze, *The Logic of Sense*, Continuum, London and New York, 2004, pp. 55-56

Of course in information theory terms, the space of indefinite possibilities is the computer processor, but this was not enough for architecture. The avant-garde, through metaphorical recourse to morphogenesis, in what can largely be seen as an innovative way of introducing ecological and efficient (sustainable) design, proposed through the research of Michael Hensel and Achim Menges of the Emergence and Design Group, morphogenetic and morpho-ecological design strategies and techniques;⁷⁸ an innovation which has developed further into parametric design.

3: 7.1 Morphogenesis in Architecture

There are a large number of different physical structures which form spontaneously as their components try to meet certain energetic requirements. These components may be constrained to meet certain energetic requirements, for example, to seek a point of minimal free energy, like a soap bubble, which acquires its spherical form by minimizing surface tension, or a common salt crystal, which adopts the form of a cube by minimizing bonding energy.⁷⁹

⁷⁸ See H Castle, M Hensel, A Menges and M Weinstock (eds.), *Emergence: Morphogenetic Design Strategies*, Architectural Design, Wiley-Academy, Vol. 74, No. 3, May/June 2004; also, *Techniques and Technologies in Morphogenetic Design*, Architectural Design, Wiley-Academy, Vol. 76, No. 2, March/April 2006; also, *Versatility and Vicissitude: Performance in Morpho-Ecological Design*, Architectural Design, Wiley, Vol. 78, No. 2, March/April 2008; and M Hensel and A Menges (eds.), *Morpho-Ecologies*, Architectural Association, London, 2006

⁷⁹ M DeLanda, *Intensive Science and Virtual Philosophy*, op cit, p. 15

In the above quote from DeLanda, the soap bubble and the salt crystal are clearly emergent forms, their chemical compositions enter into an antagonistic relationship with their immediate environment, and they form externally articulate boundaries. This, we can say is morphogenesis. There are other forms of morphogenesis, e.g., stable social configurations, etc. however, that is the subject of a different review.

The concept of morphogenesis was introduced into architecture as an industrial concern and as a method of form finding, following examples from the natural environment, particularly plant forms, as they demonstrated the closest relationship to buildings (structural organisation, circulation of energy: mechanical and electrical flows, photosynthesis, etc.). To this end, innumerable publications were made, exalting the new found science in architecture of emergence and morphogenesis. The problem was: none of the publications explained with any coherence what the concepts meant. The main concern was the novelty of it, and its ability to latch onto informational systems. Morphogenetic architecture thus became a style of architectural design. Of course, it already had its origins in virtual architecture, and the *objectile*, it was thus a logical contender in the evolutionary milieu of form finding in contemporary and experimental architectural practice. While it may considered

as an industrial art-form, it is difficult to consider it as avant-garde, because, the motivation as with the *objectile* was industrial production.

The same may be said of parametric design, which followed, while in certain cases, the objective was for efficiency of design, in other cases, it has simply been a method of grouped panels along continuous surfaces, the names of the relevant software bear testament to this.⁸⁰

3: 8.0 Conclusion: Non-Standard Architecture and Beyond

3: 8.1 Information Theory and Event

Information theory has had significant effects on architecture over the last decade, and its impact will be continuously felt. However, while it provides models and methods for engaging with the material and technological world, it condemns the human to the state of any other organism. While this is logically acceptable given the parameters that have been set, it is insufficient. The concept of *event* thus proves paramount in unpacking the problems of information theory, morphogenetic or otherwise. Thus, while Bergson's thesis on adaptation is innovative, it resists antagonistic struggle as a motivation for survival of species, a development covered in the discussion on the *arms race* in Dawkins

⁸⁰ Bentley's Generative Components, and the Rhinoceros plug-in, Paneling Tools are two examples.

and DeLanda, which proved fundamental to the development of cybernetics (Norbert Wiener's thesis on *The Human Use of Human Beings* exposes some of the latent antagonisms between information theory and humanity). Further, because it cannot be claimed that any scientific method can inform us as to the totality of life, what distinguishes humanity as we know it, is its dependence on faith, or belief; thus, Badiou's thesis on fidelity to the *event*. Philosophically, *event* can briefly be described as a *moment* of antagonism between opposing forces. It may be instantaneous or extended, but regardless of the form it takes, it leaves no physical trace of itself. What distinguishes humans, in the philosophy of Badiou is the ability to follow blindly the unknown trajectory of the *event*, what he calls a fidelity to the *event*. He posits however, that it is difficult to remain in fidelity to event, thus it is the domain of *concrete subjectivity*, an exclusive domain of the human subject and not any other animal form.⁸¹ Therefore, because humans are the subject of architecture, it becomes apparent that architecture must include *event*.

Further, because the aim of the thesis is a search for seduction in architecture; and nothing within the body of information theory provides for such a human concept, its search is repositioned within *event*. Thus while seduction is one of

⁸¹ A Badiou, *Ethics: An Essay on the Understanding of Evil*, Verso, 2001

the strategies within Baudrillard's thought, and he treats it as event, Baudrillard is subject to the same submission to capitalism as is Deleuze; the quest for seduction is therefore repositioned with *event* in Badiou. Badiou names four types of *event* (amorous, artistic, scientific and political); therefore, for the purpose of this enquiry, it is located within the amorous. In classical thought (which Badiou advocates) seduction is within the domain of love, and love within the thought of Badiou is the scene (or arena) of the Two. It thus appeals to this research to follow that trajectory. The next chapter will focus on the justification for the shift.

3: 8.2 Deleuze and Architecture

While Deleuze's ontology may not be necessarily essentialist, he submits to a specific type of logic. Deleuze privileges a mechanistic *point of view*, and he is engrossed in reductive science, which is apparent in *the fold*: where the *objectile* is primarily a form of continuous curvature. Similarly, in his work on cinema, he has to invert Bergson to make the theses on information theory and morphogenesis fit his logical universe. While these inversions are innovative, they are not revolutionary, as they contribute no new understanding to

information theory or morphogenesis, as all they achieve are simulations.⁸² By his own admission, the purpose of *taking a philosopher from the back* is in order to produce new offspring, even if monstrous. It thus appears that in order to justify a certain position, Deleuze submits to capitalism, hence the inversion in his thesis of Bergson's thought to the artifice of cinema⁸³; i.e., while Bergson's interest is based on the cinematic as probabilistic cognition, for Deleuze, this cognition that is itself reducible to the cinematic set in film production.

Thus, while architecture embraces the mannerisms of emergence and morphogenesis, it must recall that in the thesis of Deleuze, they are simply mannerisms, and it becomes absurd that building systems be subject to such mannerisms. In this regard, if the avant-garde wish to adopt mannerisms, then they should be bold enough to dissociate them from the scientific practice of building, and when they do associate them, they should be brave enough to admit their methods. A few avant-garde architects can be said to be forthcoming about their methods, i.e., the production of undifferentiated or nonstandard geometry, namely: Hernan Diaz Alonso (Xefirotarch), EZCT Architecture and

⁸² These simulations are also present in his thesis on the war machine: where two opposing forces are taken as belonging to the State. Deleuze was familiar with the anthropological research of Levi-Strauss, Hubert and Mauss, Caillois, etc. thus it is curious that he was unable in his determination of multiplicity to consider the pure exteriority. While he accepts that systems are not closed, he is unable to detach his thought from the inside.

⁸³ This is partly why Badiou condemns Deleuze as a philosopher of capitalism.

Design Research, Alisa Andrasek (Biothing), and Peter Macapia (DORA: Design Office for Research and Architecture).⁸⁴

Finally, if the avant-garde wishes to engage with philosophy, and not common place academicism, it is essential that rigorous research be carried out into the philosophies and philosophers that are cited endlessly in their publications. To this end, the second volume of this thesis deals with the philosophical problems of emergence, becomings, virtuality, concrete subjectivity and nonsense (disjunctive synthesis).

⁸⁴ See E Guenoun (ed.), Pavillon Serrousi, Éditions HYX, Orléans, 2007

Chapter 4

Research Context: *The Object*

4: 1.0 Introduction

Based on the theoretical deficiencies identified in the literature review regarding the *objectile*, with specific regard to information theory and the capitalist reduction of the subject to any-object-whatsoever, this chapter discusses the Marxist critique of the production of the object and its transformation into a commodity, Baudrillard's notion of seduction and its relationship with the commodity, and the technological production of the objectile and its relationship to Leibniz.

It connects the commodity as enchanted object to its technological production as with Marx in *Capital*, and subsequently to the *Fatal Strategy* in Baudrillard and the *Fold* in Deleuze; but resists the objectification of *becoming/emergence* through recourse to the cosmologies of Leibniz in *The Monadology* and Plato in the *Timaeus*. In so doing, it argues for architecture as a thematic staging and creation of worlds. However, to achieve this, it draws upon findings within the physics of superconductivity to give justification to Leibniz, but claims that as with

Spinoza and Plato, any claim to idealism or essentialism is problematic because of the conjectural nature of knowledge.

It concludes through recourse to the axiomatic method and the declaration of the generic procedure as *event*, thus abandoning the technological production of the *objectile* and seduction of the commodity, for a contemporary resurrection of the amorous world. Arguing for architecture as a creation of worlds, and claiming that only the banal reduction of capitalist representation can sanction it as the creation of buildings or objects (mannerist or otherwise).

4: 2.0 The Commodity and the *Object*

4: 2.1 Marx

The form of wood, for instance, is altered if a table is made out of it. Nevertheless the table continues to be wood, an ordinary, sensuous thing. But soon as it emerges as a commodity, it changes into a thing which transcends sensuousness. It not only stands with its feet on the ground, but, in relation to other commodities, it stands on its head, and evolves out of its wooden brain grotesque ideas, far more wonderful than if it were to begin dancing of its own free will.¹

Marx begins 'Capital' with the claim that the preponderance of commodities is specific to nations where the capitalist mode of production is prevalent; that the

¹ K Marx, *Capital: A Critique of Political Economy*, Vol. I, Penguin Classics, London, 1990, p. 164

commodity is not the same as mere goods or other forms of social exchange as are prevalent in subsistence economies, but is created as an abstraction of the relationship between its useful quality as a product (use-value) and its equivalence, in quantities, as a mode of exchange (exchange-value). Marx states that the mysterious quality of the *object* (the commodity-form²) consists in an objectification of relationships between the object's social forms of production (human labour, technology, etc.), and the criteria for exchange with other objects. That is, the mystery of the object resides in the 'reflection' of its forms of social production; turning a commonplace object into a commodity, through its relationship of exchange (value) with other objects. According to Marx, capitalist production, which renders goods as commodities is a specifically private form of production (by a collective of producers, the bourgeoisie³); which, by reducing labour to a function of productive time, transform goods into abstract categories of exchange (exchange-value)⁴. Thus, the commodity is

² Ibid.

³ See K Marx and F Engels, *The Communist Manifesto*, Penguin Classics, London, 2002

⁴ The object of Marx's critique of the commodity is to present an argument against the latent inequalities under bourgeois modes of production, and posit for egalitarian modes of production, thus doing away with commodities (production of value), towards production of goods and services. See also Book 5 of the *Nicomachean Ethics*, where Aristotle discusses the equivalence of commodities produced by equal human labour. Marx's argument against this is that Greek society was built by the labour of slaves (not free men, as the argument suggests), as such, the equality cannot be of human labour in general, but of a special class of producers. "An association for exchange is formed not from two doctors but from a doctor and a farmer, and in general from parties that are different and not equal; but these must be equated. Hence all

an object, transformed through the interaction of producers (convention), to abstract value. Exchange however, is possible only to the extent that the product (use-value) satisfies the need of another producer as an object of consumption. Therefore, as in the Lacanian psychoanalytic, it is the 'ego ideal'⁵ that turns the object into a commodity, as a result of a 'private identification' (via reflection) with the object. The object thus becomes an object of value, geared towards personal profit; hence, Marx's equation of the mystery of the commodity to fetish, through recourse to religion, is adequate; because value is pure invention, based on an abstraction of productive time in relation to general forms of human production. As in religious ideology (also cinema and the mass media machinery⁶), 'we are taught (as subjects of bourgeois capitalism apropos of Christianity), what to desire'.⁷

products that are exchanged must be in some way comparable. It is this that has led to the introduction of money, which serves as a sort of mean, since it is a measure of everything, and so a measure the excesses and deficiency of value, informing us, for example, how many shoes are equivalent to a house or so much food. Then as a builder is to a shoemaker, so must x shoes be to a house or so much food. Apart from this formula there can be no exchange and no association; and the formula cannot be applied unless the products are somehow equated" Aristotle, *The Nicomachean Ethics*, 1133a15-25, Penguin Classics, 2004, p. 125

⁵ The ego ideal in Lacan is part of the trio: id, ego, superego; which models itself along the expectations of collective social expectation (ideology, religion, etc.).

See S Žižek, *How to Read Lacan*, <http://www.lacan.com/zizraphael.htm>, last accessed at 16:01, on 01 February 2010

⁶ Hitler's propaganda machine was effectuated through the media under Joseph Goebbels and other film producers, including Leni Riefenstahl (*Triumph of the Will* is one of the most acclaimed films from the 1930's, and Riefenstahl claims it was not a propaganda film but an purely artistic rendition of the time. What is in fact most interesting about the film is the

4: 2.2 Baudrillard

Following Marx, Baudrillard claims that the late-capitalist commodity is no longer the passive form of material production, as in the coat or the length of linen, but has crystallised into a living form, where it is not simply production that determines value, but also consumption; and with the proliferation of the media, the object of consumption can range between the inanimate and the human.

The bourgeois subject is thus what constitutes the crystal in Baudrillard's thesis on the object. For him, the commodity is transformed; it enters into a fatal relationship with the human subject and annihilates it. Baudrillard does not consider this negative: as if to say, a pop star or any other syndicated individual were the same as a branded product (merchandise). For Baudrillard, this is what

seeming 'correctness' of everything German), see E Rentschler, *Ministry of Illusion: Nazi Cinema and its Afterlife*, Harvard University Press, Massachusetts, 1996; also *Triumph des Willens*, <http://www.youtube.com/watch?v=GcFuHGHfYwE>, last accessed at 20:58, on 01 February 2010; similarly, the Western media is in itself a massive propaganda machine, perpetrating Western ideals over the rest of the world. The most recent is the coverage of the Haiti disaster (CNN, SKY News and the BBC), where the main focus of the effort was Haiti being the poorest country in the Western Hemisphere/ Americas, as if to say, 'look how well off we are in comparison to them'.

⁷ See S Žižek, *The Pervert's Guide to Cinema*. "cinema is the ultimate pervert art; [...] cinema tells us what to desire"

he terms the 'Revenge of the Crystal'⁸, meaning that the spectre of capitalism, what Marx had depicted of the commodity, has become flesh. But nor does he insist on the single individual-object, he extends his thesis to include consumer society writ large. As such, there is a combined disappearance of the subject and the object, and the appearance of the illusive crystal. Seduction is what annihilates the subject-object couplet, and brings into being the crystal.⁹ For Baudrillard, this *fatal strategy* is also the *Principle of Evil* "total irreconcilability and total reversibility at the same time."¹⁰ The crystal is thus a *pure object* (appearance), totally devoid of meaning (as seduction nullifies meaning¹¹), but nor is it frivolous or passive. On this matter, his arguments range from *trompe l'oeil* to *simulacra and simulation*, but the subject is the same: it is an annihilation

⁸ J Baudrillard, 'Revenge of the Crystal: An interview with Guy Bellavance', in *Revenge of the Crystal: Selected Writings on the Modern Object and its Destiny, 1968-1983*, P Foss and J Pefanis (eds. and trans.), Pluto Press, Australia, 1990

⁹ "Something else happens: a form of challenge, seduction, or play, which brings more intense beings into being." Ibid. p. 24; see also G Deleuze, *The Fold, Leibniz and the Baroque*, Continuum, London, 2006

¹⁰ Ibid. p. 26, Baudrillard's thesis on seduction, and on Evil draws upon the notion of transgression and/or conflict; this fatal strategy is also for Baudrillard what makes art. There is thus a causal correlation in Baudrillard between conflict, transgression, seduction, play, and art. For him, the terms are used as an active disengagement with the Law, representation, and imperial order. Here he is similar to Bataille. Nietzsche's evil is indifferent; it is a form of disinterested interest. This becomes evident in Badiou, when Nietzsche's *übermensch* is equated with the warrior (the art of war is indifferent). It is Ethics (Aristotlean) that will prove to be the problem for Badiou.

¹¹ J Baudrillard, 'On Seduction' in *Jean Baudrillard: Selected Writings*, M Poster (ed.), Polity Press, Cambridge, 1988, p. 149

or disappearance of the real through excess, coupling secrecy and challenge, thus sustaining mystery (enchantment).

4: 2.3 Deleuze

The object in Deleuze is something considerably more radical than in Marx or in Baudrillard. For Deleuze, the object is a manifestation three things: fluidity of matter, the elasticity of bodies, and a motivating spirit as mechanism¹². Thus he extends the strictly political economy thesis of Marx by entering it into a relationship with evolutionary science. The result is that the object, that is, 'any possible object' (animate or inanimate, organic or inorganic) without exception is produced (following Bergson and Leibniz) on two levels: the actual, which is the physical body of the object and the plastic forces acting on its formation within any fluid milieu (environment¹³); and the virtual, which is the internal motivational mechanism of the object (spirit/soul¹⁴, chemical, genetic, etc.); but the object folds on itself (differentiation/ morpho-genesis), that is, the virtual aspect of the object is subject to interference from its external milieu

¹² G Deleuze, *The Fold: Leibniz and the Baroque*, op cit

¹³ Every environment is fluid, as it consists on forces ('natural', chemical, political, economic, artistic, etc.) which are constantly in flux

¹⁴ "souls [...], are 'primitive forces' or immaterial principles of life that are defined only in respect to the inside, in the self, and 'through analogy with the mind.' We can nonetheless remember that these animal souls, with their subjugated organism, exist everywhere in inorganic matter." G Deleuze, *The Fold: Leibniz and the Baroque*, op cit, p. 13

(epigenesis), which in turn changes its actual/physical manifestation ad infinitum. Deleuze argues that the manifestation of objects/bodies in a given milieu is thus one of curvature, because it is always initiated by intrinsic forces of inflection. He states that: were they (objects/bodies) isolated, "they would follow the straight tangent"¹⁵; however, this is not the case. Baroque is thus for Deleuze, what *trompe l'oeil* is for Baudrillard.

4: 3.0 The *Object* and *Event*

Central to Baudrillard and Deleuze is the notion of *event*. In Baudrillard, it is the moment of origin of the *fatal strategy*: seduction, the moment of annihilation between subject and object, where multitudes of signs merge with those of bodies and creates situations of indistinction, where bodies become commodities and vice versa. In Deleuze, *event* is the moment of pure differential motion, or of pure becoming as 'rate of change' (dx/dt): the projectile, the line of flight, the inflection. However, differentials are common to both mathematics and physics: in mathematics, as pure abstract functions, and in physics as determinants of rates of change (velocity, acceleration, projectiles, etc.). Accordingly, Deleuze's wager with Leibniz remains with mathematics and the objectification of functions, that is, the abstract differential functions become

¹⁵ Ibid.

objectified as defining families of curves and surfaces of variable curvature¹⁶. *Becoming* as such becomes objectified in Deleuze through differential calculus. This is his genius, and the decisive move away from the abstraction encountered in Baudrillard. The object as a physical/actual form can thus claim to be truly enchanted, as its soul is embodied with it; hence the appeal of Bernard Cache's *objectile*. Like Deleuze, Cache defines the inflection as the primary form of all objects/bodies, and is able to create unique furniture pieces through recourse to differential calculus and numerical controlled machines.

This new object we can call *objectile*. As Bernard Cache has demonstrated, this is a very modern conception of the technological object: it refers neither to the beginnings of the industrial era nor to the idea of the standard that still upheld a semblance of essence and imposed a law of constancy ('the object produced by and for the masses'), but to our current state of things, where fluctuation of the the norm replaces the permanence of law, where the object assumes a place in a continuum by variation; where industrial automation or serial machineries replace stamped forms.¹⁷

¹⁶¹⁶ "When mathematics assumes variation as its objective, the notion of function tends to be extracted, but the notion of objective also changes and becomes functional. [...]. There exists thus a series of curves that not only imply constant parameters for each and every curve, but the reduction of variables to a 'single and unique variability' of the touching or tangent curve: the fold. The goal is no longer defined by an essential form, but reaches a pure functionality as if declining a family of curves framed by parameters, inseparable from a series of possible declensions or from a surface of variable curvature that it is itself describing." Ibid. pp. 19-20

¹⁷ Ibid. p. 20

Deleuze continues the discussion on the *objectile* through a notion he describes as temporal modulation, which implies that the formation of curvature is in continuous motion, and as opposed to fixed moulds, only when the modulation is 'paused' (as in a cinematic sequence) is any given form able to be produced. The objectile thus finds itself between moulds of infinite variation¹⁸.

...

The commodity in Marx thus seems to have come full circle. All that has changed is the method of production. Thus, production remains in private hands, and whether the individual artisan, tailor, weaver or whatever, or the loom, sewing machine or numerical device, production remains with a specific minority; hence Badiou and Žižek's claim that the philosophy of Deleuze plays into the hands of late capitalism; a simulation unforgivable by Badiou.¹⁹ Deleuze confirms this when he discusses the new subject (*superject*), he states that the subject is located/formed from a 'unique point of view' along the curve of continuous variation (inflection). Thus, if we accept inflection as a given, the subject produces and is produced from its position, contingent to the surface/curve of continuous variation. It holds a point of view which objectifies

¹⁸ The architectural references to Deleuze and Cache in this regard are numerous

¹⁹ See A Badiou, *Deleuze: The Clamour of Being, Theory out of Bounds*, Vol. 16, University of Minnesota Press, Minneapolis and London, 2000

the inflection: the subject is thus any-subject-whatever, or is privileged²⁰. For Deleuze, the subject is included into the production of inflection: *The Fold* as such, is a coupling of inflection and inclusion.²¹

It is an envelope of inherence or of unilateral 'inhesion': inclusion or inherence is *the final cause of the fold*, such that we move indiscernibly from the latter to the former. Between the two, a gap is opened which makes the envelope the reason for the fold: what is folded is the included, the inherent. It can be stated that what is folded is only virtual and currently exists only in an envelope, in something that envelopes it.²²

In one fell swoop, Deleuze equates the object, by way of Leibniz to the inflection, of which the inflection is the smallest substance. But, the inflection is also a monad, and a monad is a world. The *object* (as inflection) is therefore a

²⁰ "In all these areas Leibniz constructs the 'table' of cases that refers to the point of view as jurisprudence or the art of judgement. It comprises the need to find the correct point of view - or rather, the best - without which disorder and chaos would reign. [...]. As in a Baroque anamorphosis, only a point of view provides us with answers and cases." G Deleuze, *The Fold: Leibniz and the Baroque*, op cit, p. 23

²¹ If this seems a bit nebulous, reference need be made to Badiou, and his recourse to sets, where he uses the Zermelo-Fraenkel Set Theory to explain the concepts of belonging and inclusion. Badiou states that inclusion is always of a situation: that is, an individual (set) may be included within a multiple known as a situation, but under sovereign determination (Law), a State. Inclusion does not mean belonging, as the individual may be included within the State, but does not belong to it, as seen with immigrants, refugees and slaves (prisoners, i.e. convicts, are included within the State, because they fall under sovereign determination). Further, to take a position within all this theory, Deleuze advocates for a being-for the world, against Heidegger's being-in the world. The subject of Badiou is neither; it is a 'being in the world, but not of the world'. See G Deleuze, *The Fold: Leibniz and the Baroque*, op cit, p. 28; also, A Badiou, *Saint Paul: The Foundation of Universalism, Cultural Memory in the Present*, M Bal and H de Vries (eds.) Stanford University Press, Stanford, California, 2003

²² G Deleuze, *The Fold: Leibniz and the Baroque*, op cit, p. 24

world.²³ The architectural references in *The Fold* thus appear anecdotal, as the main object of the argument is to posit some sort of cosmology. This is more apparent in his reference to Giordano Bruno and the Gnostic idea of the One, where he uses Leibniz purely to offer Baroque mannerism as a solution to the current impasse experienced in the West from the disappearance of ideology (religious or otherwise), and the destruction of the patriarchal centre. The world of Deleuze is a capitalist world.²⁴

4: 3.1 *Event* and the Question of Seduction

The answer to the question '*how does one create the mysterious/seductive object in post-digital architecture?*' is thus negative: one doesn't. The mystery/seduction of the object resides in its ability to satisfy specific needs, or its value; but this value has transcended Marx and Aristotle's notion of money and equivalence, and now resides with global power: the mysterious object is the product of the highly controlled technological and software devices of Autodesk, Bentley,

²³ "As an individual unit each monad includes the whole series; hence it conveys the entire world, but does not express it *without expressing more clearly, a small region of the world, a 'subdivision', a borough of the city, a finite sequence.*" Ibid. p. 27

²⁴ In architecture, only the most prestigious institutions have latched on to the use numerical controlled machines, algorithmic processes etc. also, these institutions have made a commodity of the objectile. The seduction of the freeform object generates income for the survival and prestige of the institutions (The Architectural Association in London, South California Institute of Technology, MIT, Harvard GSD, etc.). Of course, central to all these institutions is also the use of parametric software like Bentley Enterprise's 'Generative Components'.

Adobe, etc. Therefore, to effectively resist its domination, and break with seduction, these devices must be used (legally and illegally to excess) to the extent that the products show for what they are as commonplace objects (and representations). This, following Žižek's famous analogy, (where a child is spun around, and in its enjoyment, it asks you to do it again and again until you die) must be the active form of resistance. As in Baudrillard, it is through excess that the banality of a situation is revealed. This is part of what Badiou posits in his thesis on *inaesthetics*, where the appearance of the presentation is demystified in order that its idea may be manifest. The *genericity* of that procedure is what Badiou considers the artistic *event*.²⁵

4: 4.0 Architecture as *objectile*

In *The Fold*, Deleuze discusses Baroque architecture as a style (mannerism) of building akin to an art form to illustrate inflection in the same way Baudrillard discusses trompe l'oeil to illustrate seduction and enchanted simulation. Like Baudrillard the importance of the Baroque as a contemporary manner is with regards the rupture of legality attached to the repetitive (standard mode of) production of the object; thus, the relevance of the *objectile*, resides in its non-

²⁵ See A Badiou, *Handbook of Inaesthetics*, W Hamacher (ed.), Stanford University Press, Stanford CA, 2005; also A Badiou, *Being and Event II: Logic of Worlds*, Continuum, London and New York, 2009

standard mode of production.²⁶ While this may be *event* in the theses of Deleuze and Baudrillard, it cannot be considered as such in Badiou, because for Badiou, a philosophical *event* necessitates a rupture caused by the determination of antagonistic elements. The modification of bourgeois production cannot be considered as *event*.

Regarding the production of buildings, the analogy of the *objectile* presupposes that buildings are built out of static moulds, and not (as they are in reality) a response to various social, economic, environmental factors, etc., with the legal consideration being the approval of the various statutory mechanisms (planning departments, etc.). The *objectile* as such, cannot serve as an adequate analogy for a building, because it is for Deleuze an abstract object: a pure philosophical construct of embodied information and process; which was not yet objectified in the mathematical universe of Leibniz. Nevertheless, a relationship can be made between Baroque architectural mannerism and the *objectile* as architectural form through a reduction which transforms the building to an art (sensational) object: a negation of its utility value; because during the Baroque, architecture was still considered an art.

²⁶ B Cache, *Earth Moves: The Furnishing of Territories*, The MIT Press, Cambridge MA and London, 1995, p. 95

Finally, regarding the mathematics of the Baroque, the available literature shows a preoccupation with linear and volumetric series (and *harmonic* proportions²⁷) as well as perspective and projective geometry.²⁸ Deleuze's preoccupation however is with the geometry of continuous curvature and the inflection of the decorative/sculptural elements as representative of the differential calculus in Leibniz. In this regard, his analogy is also problematic, as it combines seemingly opposed geometric systems.

4: 4.1 Architecture as Theory

Antoine Picon helps to resolve the impasse by drawing attention to the shifting roles of the architect, from what started as an art education, into its eventual form after the enlightenment with engineering. Accordingly, until the Enlightenment, architecture had been a symbol of sovereign power (church, sovereign ruler, etc.), and in this regard it was largely sculptural. However, this symbol of power was centred on a notion of God and the universe. In this

²⁷ See C Norberg-Schulz, *Baroque Architecture*, P Luigi Nervi (ed.), Harry N. Abrams Inc., Publishers, New York, 1971

²⁸ See L March, *Architectonics of Humanism: Essays on Number in Architecture*, Academy Editions, Chichester, 1998; G L Hersey *Architecture and Geometry in The Age of the Baroque*, The University of Chicago Press, Chicago and London, 2000; and A Pérez-Gómez and L Pelletier, *Architectural Representation and The Perspective Hinge*, The MIT Press, Cambridge MA and London, 1997

regard therefore, it is possible to equate the mathematics of Leibniz to a general world view which was reflected in the art of the time, including architecture.

The collapse of classical architectural theory must be seen in the context of this general shift from the 'approximate world' and its inflected geometry to the universe of 'precision' and projective geometry.²⁹

Soon architecture would constitute nothing more than an ineluctable subordinate for the application of technology.³⁰

While 'court society' was able to recognise itself in the gradations of classical architecture, the rising bourgeoisie would increasingly identify itself with engineers whose task it was to organise the territory and to adapt it to the needs of industry and of profit. The accuracy of their calculations will become synonymous with progress. From the world of gesture and approximation to the universe of precision, the evolution of technology came up against that of society.³¹

Therefore, to restore architecture to its universal position of creating worlds and presenting ideas, it becomes necessary to revisit the Baroque, but also the Renaissance, because from the Enlightenment, architecture became a matter of the state (and before the Renaissance, a matter for itinerant journeymen) and

²⁹ A Picon, *French Architects and Engineers in the Age of Enlightenment*, Cambridge University Press, New York and Victoria, Australia, 1992, p. 7

³⁰ Ibid. p. 10

³¹ Ibid.

became formally channelled towards the production of buildings, and the structuring of urban society.³² However, following Badiou's thought on artistic production, it is the idea which presents itself in these periods that will be discussed, and not the rationale behind their production. Thus, resisting Deleuze, *The Timaeus* will provide the mathematical/axiomatic basis for discussing the Baroque.

An important point considering architecture is that even with the current awe and obsession of the avant-garde with computation and parametrics, Deleuze's proposition for the mathematical production of surfaces of variable curvature via numerically controlled machines can be related to the rationalisation of architecture with engineering in the Enlightenment, where architecture departs from theory to embrace the efficiency of engineering. It is of relevance here, because this was the period when architecture as an academic discipline made this significant shift (architecture, and its practice). Further, 'architecture' (through the architectural treatise) may as well have been considered avant-garde at the time, because construction (the practice of architecture), generally,

³² A Picon, *French Architects and Engineers in the Age of Enlightenment*, op cit; the Academy of Architecture founded in 1671 under Colbert, had three main tasks: the elaboration of an official doctrine; the development of modes of instruction that might propagate that doctrine; and technical control for efficient production. See p. 26

constituted eighty to ninety percent of what was built at the end of the eighteenth century.³³

4: 5.0 Conclusion: Architecture as Cosmology

4: 5.1 Plato, Geometry and Monads

In order to depart from the *objectile* to a cosmology, the thought of any claims to knowledge have to be abandoned because of their conjectural natures, as scientific discoveries demonstrate. If the purpose of one discovery or theory is to delegitimize its predecessor, then it cannot be claimed that either discoveries holds absolutely true. This is the case with the ideal geometry in Plato and of the monads in Leibniz, and more recently, the discovery in physics of *Bose-Einstein Condensates* and the proximity of monads to the unitary count in Cantorian Set Theory.

4: 5.1.1 Monads, the Ultracold and Set Theory

When cooled, a gas becomes liquid and then solid: steam, water, ice, in our most familiar experience. But we get a different phase transition with a gas of cold bosons. A great many of those atoms will go into the same state of lowest energy, while the rest behave like an ideal gas whose distribution of energies is Gaussian.

³³ Ibid. pp. 10-15

George Uhlenbeck (1900-1988) introduced the essential concept of *spin*. [...]. Spin is a quantum number that determines the kinetic energy of a particle. It can have only integral values (0, 1, or e.g. -3) or half integral values ($\frac{1}{2}$, or e.g. $2\frac{1}{2}$). Bosons, the gregarious entities that satisfy Bose-Einstein statistics, have integral spin, while fermions, the solitary ones have half-integral spin. Very light particles like electrons tend to be fermions, while heavier ones such as protons are mostly bosons. The other isotopes have half-integral spin and are therefore fermions. Hence my conceit that everything in the world is either a boson or a fermion. Or: half the things in the world disobey a weak form of Leibniz's principle of the Identity of Indiscernibles, and the other half obey a strong form, the Pauli exclusion principle.³⁴

After the production of *Bose-Einstein Condensates* in 1995³⁵, at close to absolute zero (-273.15° C), the temperature at which 'matter exhibits quantum effects like superconductivity and super fluidity'³⁶, the smallest particles following Leibniz's monads were confirmed as quanta, i.e. energy particles (without mass) which exhibited continuous curvature (spin), and could be objectified (by phenomenological reduction) as curves. Thus, Plato's geometric essences make way for Leibniz's monads.

³⁴ I Hacking, Another New World is Being Constructed Right Now: The Ultracold, The Shape of Experiment, Conference at the Max Planck Institute for the History of Science, Berlin, 2 - 5 June 2005, Preprint 318, 2006, p. 23

³⁵ Ibid. p. 16

³⁶ http://en.wikipedia.org/wiki/Absolute_zero, last accessed at 16:31 on 10 February 2010

Nevertheless, Plato remains relevant, because the idea/substance of both arguments is the same: of a creator, of every monad/substance being a reflection/image of god, of a coming into being/becoming, of multiplicities, of perception, and of flux.³⁷ Therefore, because substances (inflections, bosons, etc.) cannot be determined as *truth*, but only as conjectures of the advances of science, only propositions/ axioms based on non empirical *ideas* of substances can serve as philosophical/ logical truths.

Thus, what becomes important for the thesis is not so much the phenomenology of Plato (ideal shapes, geometrical solids, proportions, etc.), or of Leibniz (continuous inflection), but of the idea of both theses, which is cosmology, the creation of a universe, or of worlds, which both incidentally contend, the existing world is the best possible³⁸ (the conceit being, following the information theory model of Shannon and Wiener, that monads carry embodied packets of *information*, and that the probabilistic model of information guarantees material

³⁷ See G W Leibniz, *The Monadology*, in *Discourse on Metaphysics and The Monadology*, Dover Publications, New York, 2005; also Plato, 'Timaeus', in *Timaeus and Critias*, T K Johansen (revised), Penguin Classics, London, 2008

³⁸ The argument is different in Spinoza, who rejects the idea of an external creator, because it implies an absurdity based on choice, and of possible other universes. Spinoza instead argues that creation is immanent, i.e. that worlds only exist as manifestations of god, meaning that god is in everything in the world, and not external to it as a creator. See B de Spinoza, *Ethics*, Penguin Books, London, 1996

production - of a universe - through recourse to choice³⁹. The proximity to Badiou in *Being and Event*, through the *Zermelo-Fraenkel Set Theory* (after the development of set theory by Georg Cantor) becomes more than coincidental, specifically as it founds its basis on an inarticulate or generic multiplicity (nothing), which is termed null set: $0 = \emptyset$, because it is irreducible to a coherent representation. Thus, it can only be articulated by reduction to a *count* or a unitary presentation through choice; i.e., $1 = \{\emptyset\}$.⁴⁰

Similarities exist in the axioms of Fraenkel's and von Neumann's universes, of which one is a development of the other, and both evolve from Cantor. However, von Neumann's possesses an absurdity, because \emptyset is taken as both itself and its count $\{\emptyset\}$ ⁴¹, i.e., the generic multiple is assumed as unitary. Hence the possibility of the statement, $2 = \{\emptyset, \{\emptyset\}\}$, similarly with x , in the statement $[x \in y \rightarrow x \cup \{x\} \in y]$, such that the dynamism of the element is reduced to its count:

³⁹ See N K Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*, The University of Chicago Press, Chicago and London, 1999, p. 52

⁴⁰ From a historical materialist perspective, Hallward states following Benjamin, that the monad is a crystallized multiplicity, i.e., $1 = \{\emptyset\}$; see P Hallward, *Badiou: A Subject to Truth*, University of Minnesota Press, Minneapolis and London, 2003, p. 124; cf. Walter Benjamin, "Theses on the Philosophy of History," theses VI and XVII, in *Illuminations: Essays and Reflections*, 255, 263

⁴¹ Badiou deals with this under Ordinal Numbers and Transitive Sets in *A Badiou, Number and Numbers*, Polity Press, Cambridge UK and Malden MA, 2008, p. 68

x in union with the count of itself, $x \cup \{x\}$ is absurd, except one is dealing with ordinals and transitive sets).⁴²

Zermelo: $0 = \emptyset, 1 = \{\emptyset\}, 2 = \{\{\emptyset\}\}, \text{etc.}$

von Neumann: $0 = \emptyset, 1 = \{\emptyset\}, 2 = \{\emptyset, \{\emptyset\}\}, \text{etc.}$

Also, their axioms of infinity:

Zermelo: $(\exists y) [\varphi \in y \wedge (\forall x) [x \in y \rightarrow \{x\} \in y]]$

von Neumann: $(\exists y) [\varphi \in y \wedge (\forall x) [x \in y \rightarrow x \cup \{x\} \in y]]$ ⁴³

Of course this is done through the axiom of the power set⁴⁴, where \emptyset is given equivalence to any random variable, e.g. δ , of which δ under the domination of the power set p , can be presented as 1, i.e., $p(\delta) = 1$. The details of this procedure cannot be dealt with in here, however, for the purpose of this thesis the axiom of

⁴² See D Singh and J N Singh, the von Neumann Universe: A Perspective, <http://www.m-hikari.com/ijcms-password2007/9-12-2007/singhIJCMS9-12-2007.pdf>, last accessed on 15 February 2010, at 16:19; von Neumann and Wiener were amongst the founders of cybernetics; he invented computing. The absurdity is strictly with relevance to the argument in this thesis, and does not hold that the von Neumann axiom is absurd in totality. See A Badiou on *transitive multiplicities* in *Number and Numbers*, op cit. pp. 64-65; also, an ordinal is an index of the being of a natural multiplicity, it deals with the stable multiplicities, p. 69; and on the Axiom of Foundation §8.14, p. 71 "there does not exist any set that is a element of itself". By natural, Badiou is referring to anything that is already under the operation of 'representation'.

⁴³ Ibid. (476-477) p. 2-3

⁴⁴ Also the 'axiom of foundation' deals with this type of operation

the power set is inadmissible.⁴⁵ Following Badiou, *event* is marked by the set that belong to itself, but itself resists a count; e.g., $x \in x$.

4: 5.1.2 Plato, *Event* and Architecture (Presentation and Representation)

The return to Plato and axiomatic thought allows a discussion on seduction (following the question in the thesis) removed from the object/*objectile*, and towards the presentation of a cosmology; of which the most proximal to seduction (as an intangible presence) is the subjective manifestation of the enchanted “scene of the amorous encounter”, posited allegorically as an art form by Ovid⁴⁶, but more specifically as an *event* in itself by Badiou. Ovid’s position within amorous thought is somewhat precarious (and specifically heterosexual), but his presentation of seduction with love in the contemporary is certainly antagonistic, i.e., it presents a philosophical situation. Thus, it is admissible. Similarly, in the *Alcibiades*, seduction is the primary motivation for the philosophical education of Alcibiades by Socrates⁴⁷. Therefore, as Badiou’s

⁴⁵ For more information on this procedure, see A Badiou, *Being and Event*, op cit., Meditations 1 through 5, particularly Meditation 5, pp. 60-69

⁴⁶ See Ovid, *The Erotic Poems*, Penguin Books, London, 1982

⁴⁷ See Plato, *Alcibiades*, N Denyer (ed.), Cambridge University Press, Cambridge, 2000; also, A Badiou, *What is Love?/ The Arena of the Two*, lecture given at the European Graduate School on 20 September 2008, <http://www.youtube.com/watch?v=l3WeGUCzaDA>, last accessed at 20:22, on 02 March 2010

“Alcibiades is about to begin his public and political life. He wishes to speak before the people and be all-powerful in the city. He is not satisfied with his traditional status, with the privileges

position (on the possibility of a construction of the amorous encounter) is predicated upon the evental trace (ε) of the indeterminate object (u) as cause of desire and the disjunctive polarities of the objects of love, i.e., the masculine (m) and feminine (f) positions; the move from seduction to the amorous encounter is thus legitimated, and sanctioned through the axiomatic concept of *event* in the thesis of Badiou.

We could say that in this case the statement ε is: "There exists u such that m and f participate in u ". Or more formally, $(\exists u) [u \leq f \text{ and } u \leq m]$. However, no one knows what u is, only its existence is affirmed - this is the most famous and manifest contingency of the amorous encounter.⁴⁸

Unlike Baudrillard and Deleuze, *event* in Badiou is not a mere chance occurrence or catastrophe; *event* is a generic occurrence which eludes representation, it is only marked retrospectively (i.e., one can only say "it happened"). Thus, while the statement "I love you" is *evental*, the actual *event* is predicated upon fidelity to the statement: which brings into being *concrete* subjectivity and worlds.

of his birth and heritage. He wishes to gain personal power over all others both inside and outside the city. At this point of intersection and transformation, Socrates intervenes and declares his love for Alcibiades. Alcibiades can no longer be the beloved; he must become a lover. He must become active in the political and love game. Thus, there is a dialectic between political and erotic discourse. Alcibiades makes his transition in specific ways in both politics and love." M Foucault, *Technologies of the Self*, in *Ethics: Essential Works of Foucault 1954-1984*, Vol. 1, P Rabinow (ed.), Penguin Books, London, 2000, p. 229

⁴⁸ See A Badiou, *Being and Event II: Logic of Worlds*, Continuum, London and New York, 2009, pp. 73-74

In the above axioms of von Neumann and Zermelo, *event* consists in relationship with $(\exists y) (\forall x)$, i.e., the statement: for 'all x ', there 'exists y ', under such and such conditions.... The axiom $(\exists y) [\varphi \in y \wedge (\forall x) [x \in y \rightarrow \{x\} \in y]]$ is thus the propositional mode that declares the possibility of event. Similarly, the declaration $1 = \{\emptyset\}$, thus $2 = \{\{\emptyset\}\}$, states that the unitary count of the null set is predicated on the count as One of any generic multiple, the statement $\{\{\emptyset\}\}$ the count of the count-as-one, is thus equated as two⁴⁹.

4: 5.2 Presentation and Resurrection

The cosmology of Badiou (subject and world), thus hinges on *event*, of which he names four types: artistic, scientific, political and amorous; stating that history is presented based on the ruptures created from these events, whether in the form of political revolution, which brings an end to a dominant regime as in the revolution of the Black Jacobins; or in the genuine hypothetical and experimental detours in science which shatter the entire body of scientific knowledge as in the Copernican revolution, Einstein's theory of relativity, or the discovery of superconductivity. The artistic event in Badiou is connected to revolutionary practices of artists like Pollock, where art becomes devoid of

⁴⁹ See A Badiou, *Being and Event*, op cit

subject matter, and is reduced to pure process⁵⁰; and the amorous event, the only one stated as an encounter, because it occurs as an encounter between the masculine and feminine positions⁵¹: through its fatal strategy, it is the one which creates the subjective *scene* (theatricality) as in Badiou's example of Book IV of the Aeneid. It is therefore not surprising that for Badiou, the neoclassical is the contemporary form of presentation⁵² in architecture, because it is specifically scenic.⁵³

*[...] resurrection, is itself also singularized by its truth-content. [...]. In art, it authorizes the explosive (and creative) forms of neo-classicism: the imitation of ancients in French tragedy; the 'Romanity' of David in painting, [...].*⁵⁴

Thus, the Renaissance, as much as the Baroque, proves conceptually relevant, because what has been inherited in architecture as erotic discourse finds its origin in the Renaissance with the publication of the *Hypnerotomachia Poliphili* in

⁵⁰ This is the point where the thesis separates building science from architecture, and where architecture becomes properly artistic; arguing that the commitment of the computational avant-garde in architecture is to building.

⁵¹ It states positions, as they are distinct from biological or otherwise empirical distinctions of sexuality. See A Badiou, *Conditions*, Continuum, London and New York, 2008

⁵² For Badiou, the presentation of an idea or its resurrection is a pure artistic event, because the idea manifests itself in a 'new capacity to inform the sensible' Being and Event II: Logic of Worlds, op cit, p. 73

⁵³ Ibid.

⁵⁴ Ibid. p. 76

1499⁵⁵. Further, the training of architects by painters in this period, gives such treatises as the *Hypnerotomachia* and Sebastiano Serlio's *Architettura*⁵⁶, architectural leverage, on par with building, as both defined the overall role of the architect, but also where representational forms which expressed microcosms of the universe.

The concept of artistic representation is however transformed, following Badiou's inversion of Plato's 'Allegory of the Cave' (*where the shadows which were projected unto the wall of the cave become original presentations, i.e. art for Badiou is the original presentation of an idea*). Therefore the built object is as valid as the drawing or computer generated image provided it presents an idea beyond its material or technical constitution and embodiment; i.e., the *object* (plane of consistency, line of flight, etc.) is not adequate in its phenomenological constitution (as a site of *event*) it must give/present or resurrect something: it must possess *a new capacity to inform*.

⁵⁵ A Vidler, Preface to *The Little House: An Architectural Seduction*, R el Khoury (trans.), Princeton Architectural Press, New York, 1996, p. 11

⁵⁶ "In thus defining the architect's role, the *Architettura* represented a major step in establishing the means by which architects were to be trained in the Vitruvian subjects. This lessened the dependence of architects on a period of study with a painter, the traditional method of education and one which had been undertaken by Serlio himself." V Hart and P Hicks, Introduction to Sebastiano Serlio on Architecture, Volume One, Books I-V of '*Tutte L'Opere D'Architettura et Prospetiva*' by Sebastiano Serlio, Yale University Press, New Haven and London, 1996, p. xvii

Therefore, the following chapter will address architecture as site of a fidelity to the amorous encounter. It introduces the concept of a *hypersensual* world, i.e. the world of love; thus, the representation of love (seduction, etc.) will be abandoned in favour of the axiomatic concept of love as *event*, initiating a philosophical procedure, and the inflections of the Baroque will be employed as part of a contemporary staging for the amorous event. With this, the *supersensual* object of seduction is abandoned for its parallel, the *hypersensual* world of love: the site of the encounter that hinges on nothing.⁵⁷

⁵⁷ In *Logic of Worlds*, Badiou celebrates Brasilia by Oscar Niemeyer and Lucio Costa as being a pure city, because it rose from nothing, an instantaneous composition; of course his greatest fascination is that Brasilia embraces the egalitarian principles of communism. See A Badiou, *Being and Event II: Logic of Worlds* op cit. p. 411

Chapter 5

Theoretical Proposition and Investigations: *Architecture, the Scene of the Two and the Erotic*¹

5: 1.0 Introduction

This chapter expands the concepts of *event* and *presentation* which were introduced at the end of Chapter 4, as a means to departing from the reductive regime of representation inherent in the capitalist mode of production. It establishes this through recourse to the *amorous encounter* in the thesis of Badiou and proceeds to strategically expose the appropriation of love by State apparatus (from the archaic to the classical period, to Gnosticism and its revival in the Renaissance, and from the Renaissance to the Modern) claiming that in this appropriation, the *amorous encounter* departs from geometric thought (as in the *world* of Dido and Aeneas in the *Aeneid*, or of Jason and Medea in the play by Euripides) and becomes objectified.

¹ In this chapter, many of the examples of the *amorous scene* contain arguments and often long quotations from the relevant literature. In some cases, the quotations have been included with the footnotes; in others they have been included within the main body of work. Nevertheless, in both cases, the intention is for them to be considered in the same way as images, they are largely representational/ presentation devices.

Consequently, the amorous scene departs from cosmology to initiation in the *Hypnerotomachia*, the defined spaces of Bastide's *La Petite Maison* and the confinements of de Sade, to the contract in Sacher-Masoch and body practices in Deleuze and Guattari, and to the clinical in Krafft-Ebing; moving from the pornographic to the pathological. Thus, while Badiou (following Plato in the *Symposium*) outlines love as enduring, i.e., the antagonistic encounter of the two sexed positions², which he calls the scene/arena of the Two, the State appropriation of love sanctions and romanticises it, by relocating it within the stasis of the conjugal relationship or the contract (marriage); with the implication that all manifestations of love which do not fall under sanction are suppressed. Consequently the antagonisms - tragedy, violence, heroism and excess amongst others - are excluded from the *scene of the Two*, but re-emerge as pathological.

Finally, with reference to artifice of Ovid, the chapter concludes by making a contemporary presentation of the *scene of the Two*, as the erotic, through a

² Badiou names the sexed positions masculine and feminine as generic terms, separate from the empirical sexual determination of male or female. The masculine or feminine may be man, woman or whatever. See A Badiou, What is Love?/ The Arena of the Two, lecture given at the European Graduate School on 20 September 2008, <http://www.youtube.com/watch?v=I3WeGUCzaDA>, last accessed at 20:22, on 02 March 2010

staging of the strategies of the encounter. Erotic architecture is thus defined as an illustration of the *evental site* and the amorous encounter.

5: 2.0 *Event and Subject*

*Alice was beginning to get very tired of sitting by her sister on the bank and of having nothing to do: once or twice she had peeped into the book her sister was reading, but it contained no pictures or conversations in it, "and what is the use of a book," thought Alice, "without pictures or conversations?"*³

After pondering for a while longer, a rabbit appeared with a pocket watch and in a hurry dashed across the garden. Alice wondered why the rabbit was wearing a waist-coat, why it had a pocket watch and why it was in such a hurry. Thus she ran after it into a rabbit-hole across the garden.

Event is something like the '*appearance of the rabbit with the pocket watch*'; it is a pure declaration from nothing. Deleuze uses such categories to break away from the domination of formal structures, hence the resemblance with Badiou. However, while there are several similarities between the theses of both philosophers, the similarity that will be considered in this enquiry resides with the statement that declares the *event* and the actual procedure following such declaration. In Deleuze, this statement is marked by a disjunctive synthesis;

³ L Carroll, *Alice's Adventures in Wonderland*, in *Alice's Adventures in Wonderland and Through the Looking-Glass*, Penguin Classics, London, 1998, p. 9

which is the random formation of things (words, etc.). Hence his fascination with portmanteau words as well as with appearances and disappearances, as in *Cheshire Cat*, the *Queen of Hearts* and the *Mad Hatter*, etc.; also, Alice's various transformations in scale: *Alice goes down the rabbit hole*, *Alice becomes big*, *Alice becomes small*, etc. in her *Adventures in Wonderland*.⁴ The difference is that because the transformations are anchored on Cartesian thought, i.e., of being sanctioned to the supremacy of reason (*ego cogito*); Badiou rejects it. For Badiou, being is pure incoherence, it is predicated on nothing; i.e., one does not know what or why a thing is, one simply affirms that it is on blind unassailable faith. This is why for Badiou, the declaration of the resurrection of Christ by Paul on the road to Damascus, or of incoherent multiplicities in the set theory by Georg Cantor declaring the infinite as pure potentiality, or of love by lovers, mark *event*, as they are all based on something unknown, and can be engaged only through actual procedures (action in the world), and not merely thought. Badiou's thesis is thus, one of endurance: action, antagonisms and struggle.⁵ Thus, the event in Badiou is similarly marked by a disjunctive synthesis; but, in the form of duration. For Badiou, *event* is a humanity function, i.e., the

⁴ Ibid. also, see G Deleuze, *The Logic of Sense*, Continuum, London, 2004

⁵ See P Hallward, *Badiou: A Subject to Truth*, University of Minnesota Press, Minneapolis and London, 2003

emergence of a concrete subject (*subject*) is predicated upon its endurance, in fidelity to a declaration.⁶

Thus, the *subject* is a multiple which originates as a resultant vector, within the fold of an *evental* site and an *event* or *encounter*; it consists in the existential continuum of the void/abyss; i.e., it proceeds by faith and conviction⁷ unto destitution. This subject can be a set of lovers: the amorous Two, the isolated researcher, a political activist, or the renegade artist. For Badiou, St Paul is the model of universal subjectivity, not through any adherence to religion (Badiou is a militant atheist), but in the blind faith of a declaration; i.e., in the message and resurrection of Christ: that man may not live by laws (written commandments) which sanction sin and death, but by grace, through love (love as the *nonliteral law* common to all, and upon which all laws are dependent, thus the commandment that “you love your neighbour as yourself”⁸), and that Christ

⁶ The nature of the declaration is elaborated upon by Badiou in his *Ethics*, he states that any concrete declaration has to be disinterested, claiming that there are many declarations which are simply simulations, i.e., they protect certain privileges. See A Badiou, *Ethics: An Essay on the Understanding of Evil*, Verso, London and New York, 2001; Žižek makes a similar claim when he states that the problem with the liberal democratic ideology is that it only wants simulations, e.g. marijuana without the paranoia, decaffeinated coffee, fat-free cream, non-alcoholic beer, etc. See S Žižek, *The Puppet and the Dwarf: The Perverse Core of Christianity*, The MIT Press, Cambridge MA and London, 2003, p. 97; also <http://www.lacan.com/zizekdecaf.htm>, last accessed at 07:55 on 09 March 2010

⁷ A Badiou, *Saint Paul: The Foundation of Universalism*, Stanford University Press, Stanford CA, 2003, p. 87

⁸ Žižek demonstrates the profundity of this statement in his claim to the impossibility of loving ones neighbour, see S Žižek, *The Plague of Fantasies*, Verso, London and New York, 1997

was crucified and rose from the dead, out of love, that mankind might be saved.⁹ Nevertheless, in his thesis on St Paul, Badiou is quick to warn that the love which Paul advocates is not the oblatory love of denial of the self in devotion to the Other, which he claims is nothing but narcissistic pretension¹⁰, but the deployment of the “power of self-love in the direction of others: a love which is addressed to everyone.”¹¹ Similarly, he warns against any concept of the Two that reduces them to a One (the couple) of representation, as the Two which proceeds in duration is reduced to the One of stasis. This One he claims is the evil of simulation (and law) and the bearer of disaster and metaphors of night, sin, etc.¹² Consequently, that the *subject* is given in the labour of love, and

⁹ Ibid. pp. 88-89

¹⁰ Ibid. p. 90; It is unclear why Badiou takes this position here, because, while he may be correct that the oblatory denial of the self is not part of the Paul’s message, this message appears in the gospel according to Matthew, “Then Jesus told his disciples, “If any man would come after me, let him deny himself and take up his cross and follow me. For whoever would save his life will lose it, and whoever loses his life for my sake will find it.”” Matt. 16:24-26, and also in the letter of Peter to the exiles “Since therefore Christ suffered in the flesh, arm yourselves with the same thought, for whoever has suffered in the flesh has ceased from sin, so as to live for the rest of time in the flesh no longer by human passions but by the will of God.” 1Pet. 4:1-2; referenced from the Revised Standard Version of The Bible, The British and Foreign Bible Society, Swindon, 1967

¹¹ Ibid.

¹² P Hallward, Badiou: A Subject to Truth, op cit; also, A Badiou, Conditions, Continuum, London and New York, 2008, p. 181-182; the One of the couple is what we find in erotic architectural treatise, as is demonstrated in the Hypnerotomachia and Bastide’s *La Petite Maison*. See sections 7 and 8 in this chapter

not merely in his sudden emergence;¹³ a concept which applies to all subjects of *evental* procedures (truths).

5: 2.1 Love

The truth of love, like that of the other conditions of philosophy, cannot simply be deduced, abstractly, by philosophers with a romantic disposition. It must be experienced or undergone. Love involves the conversion of a "hateful self" or "dead Ego" - a being that one could not by definition love - into a subject. Only a subject is worthy of love, and "the subjective process of a truth is one and the same thing as a love for that truth".¹⁴

As with Plato and Cantor, Badiou's interest in Paul is indifferent to the ideal formation of the amorous *event*: *agapē*; his interest is in the procedure following the declaration of the *event* (or the love of truth) as essential to constituting a *subject*; for him, love is thus a perfect exemplar, along with the other procedures, because of the impossibility of its representation, he states that even the subjects of the amorous encounter have no knowledge of love¹⁵. Thus, "A truth, and it does not matter which one, is always indifferent to the predicative distribution

¹³ A Badiou, Saint Paul: The Foundation of Universalism, op cit. pp. 91-92

¹⁴ P Hallward, Badiou: A Subject to Truth, op cit, p. 185

¹⁵ In the story of Cupid and Psyche, Cupid (Love) warns Psyche never to look upon him, because if she does she will be able to describe him to her sisters and this will bring them disaster. See section 6.1b in this chapter

of its support.”¹⁶ Consequently, when he begins to describe the subjective manifestations of love, it is without surprise that it has nothing to do with Paul or Christianity.

Thus said, following Badiou, love presents itself as a scene, in the cinematic sense (recall Bergson on duration). Therefore, with regards to the aim of the thesis, which is the quest for the seductive, the proximal presentation of the amorous encounter is enchantment. Its form of global presentation π (the set of consequences from a fidelity to the encounter) is the enchantment of the scene of the Two.¹⁷

5: 2.2 Amorous Encounter: The Scene of the Two

Because he is the son of Resource and Poverty, Love's situation is like this. First of all he's always poor; far from being sensitive and beautiful, as is commonly supposed, he's tough, with hardened skin, without shoes or home. He always sleeps rough, on the ground, with no bed, lying in doorways and by roads in open air; sharing his mother's nature, he always lives in a state of need. On the other hand, taking after his father, he schemes to get hold of the beautiful and good things. He's brave, impetuous and intense; a formidable hunter, always weaving tricks; he

¹⁶ A Badiou, *Conditions*, op cit, p. 185

¹⁷ See A Badiou, *Being and Event II: Logic of Worlds*, Continuum, London and New York, 2009, pp. 52, 74-77

*desires knowledge and is resourceful in getting it; a lifelong lover of wisdom; clever at using magic, drugs and sophistry.*¹⁸

In Plato, love is a philosophical procedure as it presents the antagonism between resource and poverty; but, it is also an ideal form. In his recourse to Plato however, Badiou rejects the notion of love as ideal or knowable form, but maintains that it is antagonistic. Analogous to this thought is the statement by Lacan (taken up initially by Badiou), again with reference to Plato,¹⁹ that 'love comes to compensate for a lack of sexual connection'. But Badiou is not satisfied with the terms 'compensate' and 'lack', for they mark love as a supplement, or ornamental semblance²⁰, subordinate to the sexual encounter and implying that sexual connection is in fact possible, a claim which Badiou rejects²¹. He posits therefore that in order to view love as an event in itself, love must be seen as a double function to the impasse between 'polarities of the sexual positions' and the 'intangible/unknowable but present cause of affectation or desire'; in fact, for Badiou, love is the truth of sexual difference; i.e., love affirms the total non-relation of the sexual polarities by creating a disjunctive Two: one and another, thyself and thy neighbour, etc., love is the affirmation of difference. Thus, Paul's

¹⁸ Plato, *The Symposium*, Penguin Classics, London, 1999, §203d, pp. 39-40

¹⁹ A Badiou, *Conditions*, op cit, p. 180

²⁰ Ibid. p. 182

²¹ For Badiou, love confirms the impossibility of sexual connection; i.e., through love, we understand the total disjunction between the sexed positions.

declaration that one is neither male nor female, Greek nor Jew, etc., is significant in this regard, as it nullifies these forms of prescribed difference.²² In this regard, love is an encounter which affirms the immanent difference and non-connection between multiplicities.

The "encounter" is not properly the encounter between two individuals, two consolidated bundles of interests and identities, but an experience that suspends or nullifies precisely this re-presentative notion of the two, a two as one plus one.²³

Therefore, as a function of its disjunctive polarities or antagonisms, it is a process in the Bergsonian sense, i.e., it endures. Not subject to the stasis of the conjugal relationship, love thus constructs a scene, "a sustainable scene or staging of the Two."²⁴ Consistent with this thought, Badiou asserts that the most genuine things that have been said about love have been said through narrative art form of novelistic prose, to which he includes 'the great love stories.'²⁵ At this juncture, the scene of the Two is analogous with Bergson's thesis on duration and narration, but also Deleuze's thesis on the movement-image regarding the 'set'. To illustrate, Badiou makes reference to a few examples,

²² In Paul's letter of to the Galatians, he states: "There is neither Jew nor Greek, there is neither slave nor free, there is neither male nor female; for you are all one in Christ Jesus." Gal. 3:28

²³ P Hallward, Badiou: A Subject to Truth, op cit, p. 187

²⁴ Ibid. p. 188

²⁵ A Badiou, Conditions, op cit., pp. 180-181

elaborating on the elements that constitute the set of the encounter, namely: their material traces, their subjective breaks, the elaboration of consequence, excess over language (resistance to established forms of representation), and the presence of a latent eternity.²⁶ Thus, the encounter is presented through the composition of those elements.

Here again, one finds a proximity to Deleuze. In his thesis on the movement-image²⁷, Deleuze begins with a discussion on the composition of cinema: frame and shot, framing and cutting, and the out of field. Badiou discusses these briefly in his essay on cinema²⁸, only to dismiss them as the formal elements of the cinematic presentation. His concern is with the event or the encounter which manifests itself in the presentation.

Movement subtracts the novelistic from language, keeping it on the moving edge between music and place. But music and place exchange their own values in turn, so that the music is annulled by pictorial allusions, while every pictorial stability is conversely dissolved into music. These transference and dissolutions are the very thing that would have constituted the Real of the idea's passage.

We could call the link between these three acceptations of the "movement" the "poetics of cinema"²⁹

²⁶ A Badiou, *Being and Event II: Logic of Worlds*, op cit., pp. 28-29

²⁷ G Deleuze, *Cinema 1: The Movement-Image*, Continuum, London and New York, 2005

²⁸ A Badiou, *The False Movements of Cinema*, in *Handbook of Inaesthetics*, W Hamacher (ed.), Stanford University Press, Stanford CA, 2005, pp. 78-88

²⁹ Ibid. p. 80

Two examples and their elements will be discussed below; namely, the amorous encounters in *The Aeneid*, and the legend of *Medea*.

5: 3.0 Amorous Examples

5: 3.1 The Aeneid

*Like devout incense thrown on smoking altars, like wax torches tipped with sulphur, I am burning with love: all day and all night, I desire nothing but Aeneas. [...]. Whatever you require of Dido, she will gladly do so long as she is yours.*³⁰

*Dido, regaled by the tales of Aeneas' travails finds herself enraptured by this man who can only have been "born of the gods"*³¹. *She has vowed not to love another man since the death of her husband at the hands of her brother, and feels ashamed at her feelings for Aeneas. Encouraged by her sister and in the midst of being pursued by several suitors, she proceeds to court Aeneas, while tactically holding the suitors off.*

The story of Dido and Aeneas, presents an enraptured disjunctive Two; Aeneas on his way to establishing a new republic, but enamoured by Dido; Dido already part of a new establishment and willing to bequeath her throne after the demise of her husband. In the analysis given by Badiou, the staging of Aeneas

³⁰ Ovid, *Dido to Aeneas*, in *The Heroides*, Penguin Books, London, 2004, pp. 58, 64

³¹ Virgil, *The Aeneid*, Penguin Books, London, 2008, p. 127

and Dido exemplifies his thesis on the 'arena of the Two', he sees both lovers as elevated to the realm of the goddesses (Juno and Venus), i.e., the unknown that preside over them. In this regard, he argues, that the truth of the amorous encounter is always beyond itself.³² Beyond this, there is the moment of the hunt, the pealing of the thunderstorm and the consummation of their love.³³ Badiou argues however, that while sexual pleasure is affirmed in love, it is not in itself an affirmation of love.

The skies have begun to rumble, peals of thunder first and the storm breaking next, a cloudburst pelting hail and the troops of hunters scattered up and down the plain, [...]. Dido and Troy's commander make their way to the same cave for shelter now. Primordial Earth and Juno, Queen of Marriage, give the signal and lightning torches flare and the sky high bears witness to the wedding [...]. This was the first day of her death, the first of grief, the cause of it all. [...].³⁴

Rumour of their affair travels far, even to her erstwhile suitors, among them king Iarbas, madly in love with Dido and seeking her hand; he is devastated and prays to the gods. Jove hears his prayers and instructs Mercury to intervene by commanding Aeneas to set sail. Mercury finds Aeneas settling into Carthage and reminds him of his commitment

³² Badiou, A. *Logic of Worlds: Being and Event II*, 2009, pp. 28-33

³³ Badiou claims that sexual pleasure is one of the manifestations of the encounter, but is not the truth of the encounter. *Ibid.*

³⁴ Virgil, *The Aeneid*, op cit, p. 133

to the founding of Rome. Distressed, Aeneas sets to depart in secret. Dido catches wind of the Trojans plot; in a rage, she blazes through the city to assail Aeneas. She reminds him of the cost of her love for him, the distrust of her people, her allies etc.

*Thanks to you, the African tribes, Numidian warlords hate me, even my own Tyrians rise against me. Thanks to you, my sense of honour is gone...*³⁵

Aeneas responds, saying that as the Tyrians have found a new home in Carthage, the Trojans must not be stopped from founding a home in a faraway land, he declares that he never took a vow of marriage, and thus must depart. In what follows, Dido curses him and stricken by grief, begins to prepare for her death and ultimately takes her life by plunging herself on Aeneas' sword.

5: 3.2 Medea

The tragedy of Medea takes the form of both a letter and meditation by Ovid³⁶ and a play by Euripides. It is one of love as a scene of the Two, and its various manifestations: deception, jealousy, rage, revenge, children and murder.

Jason, commander of the Argonauts is sent by his uncle Pelias to Colchis to get the Golden Fleece, a ram guarded by a dangerous dragon³⁷. Upon reaching Colchis, he

³⁵ Ibid. p. 138

³⁶ See Ovid, Book 7 of Metamorphosis, Penguin Books, London, 2004, pp. 246-291 and Ovid, Medea to Jason, in Book XII of the Heroides, Penguin Books, London, 2004, pp. 103-115

³⁷ Ovid, Medea and Jason, in Metamorphosis, op cit., n.7: 7-8, p. 649

arrives at the palace of Aeëtes, Medea's father to state his mission. Medea sees him and is taken by his graces; she falls in love with him despite herself, and seeing the danger ahead of him proceeds to do everything in her power to grant him success in gaining the ram for which he has come. Before he gets to the ram, he must pass through a herd of fire breathing bulls, and then a set of warriors, for which he is ill prepared...

Only a cruel and heartless person could fail to be struck by his youthfulness, breeding and courage. And who could be blind to his handsome looks, if he lacked all else? My heart, at least, has been stirred.³⁸

Her love for Jason will come at a price; as he is from a foreign land, she will lose her home and her family to be with him. In a letter to him she states³⁹.

... and I gave the fleece into your hands. By this act I betrayed my father, gave up my throne and the country of my birth, and my reward is exile.⁴⁰

Medea will help him on the conditions that he leaves her his sword, and that he marries her. She then proceeds to the temple of Hecate, the goddess of spells, to prepare his enchantment. Jason, in fear of defeat goes into the temple, and bewitched by Medea, agrees to marry her if she would grant success to his command.

³⁸ Ibid. p. 249

³⁹ To sustain the theatrics, I am writing as if her letter was in fact written by her, and not the fiction by Ovid in *The Heroides*

⁴⁰ Ovid, *Medea to Jason*, op cit. p. 109

With the help of her potions, his command is victorious; he subdues the infernal herd, making them plough the fields; annihilates the soldiers and their warrior companions, born of dragon's teeth; sends the dragon into a deep and gains the fleece. He takes Medea away, and marries her. They return to Thessaly together to celebrate his victory and to celebrate their union, but Jason's father Aeson is too ill, Jason pleads with his newly wedded wife to restore his father to the vigour of youth, while he offers some of his years in return⁴¹, Medea refuses to take his years, but concocts a potion to heal his father. After this feat, she goes in search of Pelias, Jason's uncle, who had sent him in search of the fleece, hoping for his demise, and through his daughters, brutally murder's him.

After ten years together, Jason leaves her for a new bride (Creusa or Glauce) whom he marries, as Medea is 'now' too barbaric for him; according to Euripides, she is daughter of Creon, king of Corinth, and he has married her in order to form a new alliance with her father. To make things worse, Creon banishes Medea from Corinth with her sons, as he fears she will meet irreparable harm on his daughter, and threatens her with death if she fails to comply with his order⁴². She grieves bitterly:

I tore my cloaks and beat my breasts; I cried out and my nails tore my cheeks. [...].

With my hair down over my body, I could not contain my shrieking, I wanted to

⁴¹ This is a magical narrative, Jason intends to pay for the his father's rejuvenation at the expense of his own unexpended youth.

⁴² Euripides, *Medea*, in *Medea and Other Plays*, 1963, pp. 25-26

*cry out 'He is mine,' and hold you. [...]. My days are unpleasant, and my nights are vigils of bitterness; sleep deserts me.*⁴³

In the play by Euripides, her grief is sustained, she declares that she hates living, and wishes to end her life, she invokes lightning to strike her dead, her grief is so sustained that her children's nurse begin to fear for them.⁴⁴ Grief is followed by wrath; and Medea vows to bring retribution on her enemies. She contemplates the murder of Creon, his daughter Glauce and Jason⁴⁵; but also her own sons because they look like their father. Each, she will meet with their separate ends.

*That you still have life, that you can take as a wife one who comes with regal rank, that you can be ungrateful to me, you owe to me. Listen well - but why should I tell your future? My wrath labours to bear all my threats. I will not hesitate to follow wherever this anger leads, you can be sure.*⁴⁶

*Children, your mother is hated, and you are cursed: death take you, with your father and perish his whole house!*⁴⁷

First she kills Glauce using a poisoned robe which corrodes her flesh and a golden crown which sets her ablaze, and the same robe also kills Creon, as he weeps over his daughter;

⁴³ Ovid, Medea to Jason, op cit. p. 111

⁴⁴ Ibid. p. 112

⁴⁵ Euripides, Medea, op cit, pp. 28-29

⁴⁶ Ovid, Medea to Jason, op cit.. p. 113

⁴⁷ Euripides, Medea, op cit, p. 20

then slays her two sons and takes their corpses away on a chariot drawn by dragons, leaving Jason alone in misery over his loss.

...

While both stories contain cinematic elements: the material manifestations of lightning and thunder, screams and shrieks, etc.; references to eternity, as when Medea takes off on her chariot, or when Dido declares that her ghost will haunt Aeneas; or the subjective breaks, when Dido and Aeneas warm themselves through the winter, or in Medea, the ten years of marital bliss; they also demonstrate the poetics of love, in its ability to exceed the boundaries of language or representation, the flame that burns in Dido, the stirring of Medea's heart; and the endurance of Eros: love as creative process (in the Bergsonian sense) i.e., the endurance of antagonistic polarities, but also love as artistic event; i.e., love as pure declaration, upon which an entire narrative universe is dependent. Also, they present a fascination to the reader; this is the enchantment of the scene of the Two. It is irreducible to the machinations of projective geometry, which may explain why the renaissance references to

antiquity include these narratives, sculpted as decorative elements into the architecture.⁴⁸

5: 4.0 Love and the War Machine⁴⁹

Following the machinations in *The Aeneid* and *Medea*, love as *event* is thus analogous to the War Machine: it presents itself as an indefinable within a situation, and inspires action. The lovers proceed in the encounter through recourse to several devices: attire, cosmetics, social behaviour (adaptation), etc. Ovid attests to this in his *ars amatoria* (The Art of Love) where he details (in three books) a series of measures for proceeding as a lover. Including where to find women, how to seduce, lay snares and catch women, etc. Incidentally, he rejects the use of potions and aphrodisiacs, as he claims they are destructive⁵⁰.

⁴⁸ See F Colonna, *Hypnerotomachia Poliphili*, J Godwin (trans.) Thames and Hudson, London, 2005

⁴⁹ This section discusses love in relationship to the theoretical position established with the War Machine. Thus, while the previous section (5:3) deals with the scene of the two from the point of literary presentation, this section (5:4) deals with the antagonisms of love in relation to evolutionary negation apropos of the War Machine. Italics are thus used as interruptions within the general commentary and to lay emphasis on what would otherwise be footnotes.

⁵⁰ This point by Ovid is very interesting, for it affirms a conscious/ vigilant approach to the pursuit of love; he expands on this in *The Art of Love*, discussing the use of alcohol, the feigning of drunkenness and the loathsomeness of drunken women. Ovid forces one to reconsider the position of thinkers like Artaud and Deleuze who champion a pseudo-nihilistic cause, advocating madness and the use of narcotics. See A Artaud, *The Theatre and Its Double*, Grove Press, New York, 1958; also, S Barber, *The Screaming Body: Antonin Artaud: Film Projects, Drawings and Sound Recordings*, Creation Books, England, 2004. It would appear that madness in classical terms and even in Nietzschean terms is an avowed amorality and is indifferent to aesthetic appearance, while in Deleuze and Artaud, it is a purely aesthetic animal-becoming,

Delusions abound. Don't mess with Thessalian witchcraft - that love-charm torn from the brow of a foal is no good. Not all Medea's herbs, not every spell and magical cantrip will suffice to keep love alive [...]. Giving girls aphrodisiac drugs, too, is useless - and dangerous: drugs can affect the brain, induce madness. Avoid all such nasty tricks. To be loved you must show yourself lovable - something good looks alone can never achieve.⁵¹

Later, he discusses how to keep women, but begins with a reference to Daedalus as analogical premise. After Daedalus built the Labyrinth with his son to house the Minotaur, king Minos wanted them dead, so that the secret of the labyrinth might be protected forever. Daedalus then devises wings so that he may fly, as the lands and the seas are controlled by Minos.⁵² Daedalus makes the wings with his son Icarus, and instructs him on how to fly: not too near the sun, and not too close to the sea. *This again is an arms race.* His son fails to heed the warning and flying close to the sun the wax that held together the feathers melted. Ovid concludes that if a god could not clip a mortal's wings, how much

hence the Deleuze's reduction of being as subjective category to (object) ordinary becoming. See G Deleuze, *The Fold: Leibniz and the Baroque*. Continuum, London and New York, 2006

⁵¹ Ovid, *The Art of Love*, in *The Erotic Poems*, Penguin Books, London, 1982, p. 194

⁵² "Minos rules earth, rules ocean: no escape by land or sea. All that remains is the sky. So through the sky we'll seek our passage - God in high heaven, forgive such a project! I do not aspire to touch your starry dwellings: this is the only way I can escape my master. Were there a way by Styx, through Stygian waters we'd swim to freedom. I must device new laws for human nature.

"Ibid. p. 192

so he clips love's (cupid) wings. *This is the enterprise of the second book.* For Ovid, the art of love, like war, is completely militaristic. In the third book, Ovid dedicates his instructions on love and seduction to women. This section is equally militaristic, and contains various forms of artifice, from the application of make-up and posture, to the use of coded language, gestures and decoys. Etiquette it would seem, is an art of love, and is rife with deception, akin to the war machine.

One more word before I stop. The characters of women all differ. To capture a thousand hearts demands a thousand devices. Some soils are better for olives, some for vines, or for wheat: you can't raise them all in one field. Hearts have as many changing moods as the face has expressions. A wise man will adapt to countless fashions, will resolve himself, like Proteus, into water, now lion, now tree, now bristling boar. Some fish are trawled, some netted, some caught with line and hook...⁵³

From the above examples, love as a truth procedure (while colourful and theatrical) consists primarily of a plunge into the abyss (death/ destitution) and toil/ struggle. This is consistent with every philosophical truth procedure: from Socrates accepting his death sentence and drinking hemlock for corrupting the

⁵³ Ibid. p. 190

youth⁵⁴, to revolutionary breaks established within scientific research, the homelessness of the new field of knowledge and its struggle in maintaining its own status. While it appears anarchistic, it remains in total fidelity to its own cause (it belongs to itself).

Love is a species of warfare. Slack troopers, go elsewhere! It takes more than cowards to guard these standards. Night-duty in winter, long route-marches, every hardship, all forms of suffering: these await the recruit who expects a soft option. [...]. Turn your fierce hands to war - or expend your strength and toil and vigour on women: this too is military service, this too needs sweat⁵⁵

In Ovid, writing about love becomes artifice; e.g., in the *Heroides* he uses the epistolary method to discuss love, in *The Erotic Poems*, war becomes the metaphor for love, complete with violence and methods of deception, and in *Fasti*, it is used in a politico-religious sense; as such, when he discusses rape, the body that is violated is the political body or State, his references are to the political and religious forms of Imperial Rome and not the sexualised form.⁵⁶ Consequently, for Ovid, the erotic is the artifice of the scene of the Two. He used the poetic form to discuss more profound matters. Similarly, the scene of the

⁵⁴ See Xenophon, Apology: Socrates' Defence to The Jury, in Xenophon IV: Memorabilia, Oeconomicus, Symposium Apology, E C Marchant and O J Todd (trans.) Loeb Classical Library: 168, Harvard University Press, Cambridge MA and London, 1923 - 2002

⁵⁵ Ovid, *The Art of Love*, op cit. pp. 198, 213

⁵⁶ Ovid, *Fasti*, Penguin Books, London, 2004

Two in this thesis is used as a method to investigate issues of creation (endurance/ becoming), subjectivity and sovereignty; hence while some of the examples which follow are pathological they are to be seen as a politics or 'greater logic'⁵⁷. Further, in analogies like that of Daedalus and the labyrinth, machines are built as architectural forms, and as means of resisting architecture: the labyrinth as a prison, and Icarus's wings as elevator. In the contemporary, or since the Enlightenment, the elements that took on decorative metaphorical form in the Renaissance became rational constructions of engineering.⁵⁸

5: 5.0 The Erotic

From the above, the erotic is named as the device for allegorical investigations under the auspices of the Two; in this regard, apart from the consubstantial references to architectural form, it is itself an architecture; but, as the scene of the Two is also an inflected architecture, it can be deduced that the erotic as artifice confirms the logic of the monad, i.e., of the fold within folds (recall Leibniz). Thus, an investigation of the erotic as a thing in itself presents nothing but historical and phenomenological artefacts, incapable of providing any truth. Consequently, while Jean-Luc Marion's expertise as a philosopher of the erotic

⁵⁷ See 5.0 below, on higher rationality in the Erotic Phenomenon of Jean-Luc Marion

⁵⁸ See A Picon, *French Architects and Engineers in the Age of Enlightenment*, Cambridge University Press, New York and Victoria, Australia, 1992

is indubitable, his position is phenomenological and the existence of love as a substantial thing and predicate of being for the lover (to be is to be loved, i.e., the self of the lover is predicated on being loved) ⁵⁹, are as such inadmissible. The disagreement is that the self of the lover is predicated by faith on the declaration that it loves. Marion's reasoning of the greater logic of the erotic is however acceptable, due to its recourse to irrationality.

*As far as telling it, thinking about it, or celebrating it: silence in the ranks. A silence saturated with pain, which pierces through the political, economic, and medical chitchat that smothers it in an attempt to reassure us. In this great erotic cemetery, the air is close, its vibrations allowing a single phrase to resonate. To declare "I love you" sounds, in the best of cases, like an obscenity or a derision, to the point where, in polite society (that of the educated), no one dares seriously to utter such nonsense.*⁶⁰

In *The Erotic Phenomenon*, Jean-Luc Marion provides three fields of enquiry for the exploration of love: as a unity with charity, as a field of higher rationality (madness or irrationality), and as a negation of being (the Cartesian ego). This enquiry rejects the first and last premise of love, not as anyway inadequate, but as inadmissible for the purposes of the current exploration, which is love as *event* (process and duration). Clearly, based on the positions outlined in the

⁵⁹ J-L Marion, *The Erotic Phenomenon*, The University of Chicago Press, Chicago and London, 2008, pp. 26-29

⁶⁰ J-L Marion, *The Erotic Phenomenon*, op cit. p. 3

methodology (the arms race and the war machine), and of the affirmation of a position there is a conflict with any notion of charity or negation of being. However, the higher rationality⁶¹ of love provides a plane for the exploration of love, as it devoid of all sensationalist or moralist ideology. Within this higher rationality, there is: "desire and oaths, abandonment and promises, sexual enjoyment and its suspension, jealousy and lies, children and death"⁶². These it is claimed are central to love as a field of concrete becoming.

As Marion's rejection of being stems from being as Cartesian subject, i.e. man as *ego cogito*, his position is acceptable, but lacks an affirmation for becoming, which he makes an effort at providing when he states that "Man is revealed to himself by the originary and radical modality of the erotic. Man loves - which is what distinguishes him from other finite beings ..."⁶³ This is unacceptable, because it bases being on being loved, but it is also impossible to affirm with any certainty that only 'man' as 'finite being' loves. Badiou of course rejects any claim to angels, which may be implied in the finitude of being. Thus, while Marion's rejection of being (*ego*) is a rejection within Cartesian coordinates, it retains the negativity of a *lack*: that the subject is somewhat incomplete except it

⁶¹ Also the Greater Logic; see A Badiou, *Being and Event II, The Logic of Worlds*, op cit.

⁶² J-L Marion, *The Erotic Phenomenon*, op cit. p. 5

⁶³ Ibid. p. 7

is loved; this is unacceptable as a position for the researcher, for it questions the fundamental principle of sovereign-becoming which drives the enquiry. Therefore, when Alberto Pérez-Gómez makes recourse to phenomenology to discuss the erotic in architecture,⁶⁴ the disagreements are similar.

In stereotypical liberal humanist mode, he dishes out his chagrin against contemporary material and technological practice, predicated upon the failures of history, as if the seduction and affects of the spaces he advocates (light, shade, texture, viewing points, procession) are any different from those which the technology driven practices seek. What Pérez-Gómez might be forgetting to acknowledge is that it is the very historical blunders which he seeks to avoid repeating that are responsible for creativity. The blatant romanticism of his enterprise, however pleasing it may be is unacceptable for this enquiry; as in their elimination of virile antagonisms, duration is terminal. As Žižek would claim, it is an architecture of jouissance; i.e., of commonplace enjoyment, the prerogative of the industrialised West.

⁶⁴ A Perez-Gomez, *Built upon Love: Architectural Longing after Ethics and Aesthetics*, The MIT Press, Cambridge MA and London, 2008

5: 5.1 Artifice

Art is the production of an infinite subjective series through the finite means of a material subtraction.

This is an intimation of how not to be a Romantic. It consists of the production of a new infinite content, of a new light [...]; producing a new light about the world by means of precise and finite summarization.⁶⁵

In his discussions on cinema⁶⁶, Badiou makes recourse to the poem by way of analogy; declaring that the poem is an artifice of language, as it evolved specifically after writing, similarly, that cinema is a pure art because it is not a composition of the visible, but a system which subtracts movement (of cutting and editing to create a perception) from duration/becoming. Likewise, the erotic is an artifice of the amorous encounter because, while it finds its basis in love, it is no longer about love, but about processes of becoming within the various manifestations of the amorous. Hence, the investigations which follow are concerned with the *processes* within erotic narrative, specifically the *simulations* of the amorous encounter. Consequently, in the following examples, love departs from tragedy and becomes reduced to workings (romance) of sexual desire. In fact, the only example of love, as love is in the story of Cupid and

⁶⁵ A Badiou, Fifteen Theses on Contemporary Art, <http://www.lacan.com/frameXXIII7.htm>, last accessed at 16:27 on 09 March 2010

⁶⁶ A Badiou, The False Movements of Cinema, in Handbook of Inaesthetics, op cit

Psyche, where Psyche is in love with Love (Cupid), but doesn't know what he looks like and even in her banishment from him, she cannot bring herself to bear the loss. Cupid in his turn has been wounded so he cannot go in pursuit of her, but as soon as he is restored to vitality, he proceeds after her. Cupid reduces himself to mere mortality because of love⁶⁷.

While Ovid and Virgil have sex as a (partial) substance of love, love itself is not reduced to sexual pleasure or pursuit, and can only be seen as *event* which sets up various 'tactical' procedures. In the novel by Apuleius, the emphasis changes from the theatrics/ artifice of prose writing and the descriptions of anguish and toil, in love, to a sort of brutal sexuality, where the influences of Gnosticism become manifest (in the use of magic spells by mortals and the presence of demons). In fact, one can begin to see the themes that will play a great role in the writing of de Sade, (murder, bestiality, scatology, etc.). That 'The Golden Ass' is noted as influential to the *Hypnerotomachia* justifies positioning the erotic within the latter as recourse to sexual pleasure and the flesh, and not despite its claims to love. The *Hypnerotomachia* is the foundational text for the subject of the erotic in architecture, but also of great influence in the practice of

⁶⁷ This is reminiscent of the 'bringing into being' of Christ. Also, of oblatory love; i.e., love for the transcendental Other, which Badiou rejects. One may also infer from this, the origins of the politics of State Christianity in Gnosticism

landscape gardening in the Renaissance. As mentioned earlier, the erotic is seen as an artifice, which comes after the presentation of love.

The next section considers the *Golden Ass*; it is a realm of sexual desire and magic, quite antithetical to Ovid, but precursory to the publication of the *Hypnerotomachia* by Colonna.

5: 6.0 Simulations

5: 6.1 The Golden Ass

The Golden Ass or *Metamorphosis* by Apuleius is a story composed of short stories, central to which is a pursuit of knowledge (carnal and magical). The main protagonist, Lucius, sets out on a journey to find salvation through the magical arts, and in the process, he has a series of sexual encounters with his host's maid. Wishing to begin on his quest, he asks to be turned into a bird, but is instead accidentally turned into an ass. He gains various opportunities to reverse the transformation, but decides to explore the world as an equine animal. He is captured by bandits and is set to work as a pack animal. However, it is only after another girl is captured by the bandits, and to soothe her, she is told the story of Cupid and Psyche, that there is anything of the amorous encounter. It is also within this story of Cupid and Psyche that the architectural

descriptions (of Cupid's temple) which may have influenced some of the architecture in the Hypnerotomachia are presented.

Lucius' journey ends in illumination (knowledge/ wisdom) while the Hypnerotomachia ends in a marriage, with the only similarity being the symbolism of amorous consummation in the parted curtains to the altar of Isis in *The Golden Ass* and the parted curtains to the altar of Venus in the Hypnerotomachia. However, if one accepts Giovanna Summerfield's introduction to Dominique Vivant Denon's *Point De Lendemain*, then both conclusions infer the same thing, as the journey of the neophyte leading to various sexual encounters and concluding in a consummation is a symbolic representation of the process of initiation.⁶⁸

⁶⁸ "To the naked eye, *Point de lendemain* appears as a typical love triangle, husband-wife-lover, and lover-woman-young lover, and at the same time as a typical induction of a young green boy to a life of sex, luxury, and intrigue.

In reality it is a Masonic initiation that we witness. [...], led by Madame de T., also called the goddess, the young protagonist enters a temple through a secret doorway, as an initiate who having passed his first stage of tests has to overcome the second. This corresponds to the stage of incarnation of Christ's life, represented primarily by the baptism, and temptation (incarnated here by the feelings of trepidation of the young protagonist, his heart palpitations and the ultimate seduction of Madame de T.)

The third stage is the one of transfiguration, that is to say the complete transformation of the initiate into a god, the complete union of mortal and immortal. Denon's protagonist is ecstatic: he bluntly confesses to Madame "I was mortal, you have turned me into a god." The fourth and final stage correspond to the Passion and Resurrection of Christ: similarly, the candidate goes through death to resurrect. Denon's account of this stage is represented by the climax of coitus, the small death, and by the surfacing of the boy to the fresh air. The stages, though clear and well-founded in both the literary piece and the Masonic *credo*, are not the only clues to the

It is important to note, that the time of Apuleius (circa 125 AD), was very different from the one of Ovid (circa 43 BC), Virgil (circa 70 BC) and Euripides (circa 434 BC). By the time of Apuleius, the beginnings of Christianity are already being witnessed, and this is mixed with various forms of Gnosticism, including the worship of Isis and Osiris, that would later form the backbone of the Rosicrucian and Masonic Lodges. As such, when the Renaissance looked back to antiquity, they looked back to the time of Apuleius, and by extension Hermes Trismegistus.⁶⁹ It is therefore not surprising, that Euripides re-presents Homer, Ovid and Virgil re-present Euripides, Apuleius re-presents Ovid and Virgil, and the Renaissance re-present Hermes Trismegistus and Apuleius; all these, through various simulations/ simulacra, in the same way philosophers are known to have misunderstood each other. In this way, Žižek advocates a short-circuiting of ideas, i.e., reading a major idea through a minor/marginalised conceptual apparatus, such that a different perspective on a known subject is

Masonic underlining message: the importance of the physical buildings, of objects, lighting, language, are strikingly present as well.

[...]

The lightning, the chiaroscuro of the trees lined up in the garden, the garden itself, which reminds us of the geometric designs, with settings that evoke the Masonic rituals and inspirations..."G Summerfield, *Point de Lendemain: Its Underlying Message*, in D Vivant Denon, *Point De Lendemain (No Tomorrow)*, University Press of America, Lanham Maryland, New York and Oxford, 2002, pp. 4-5

⁶⁹ Frances Yates has covered this extensively.

revealed.⁷⁰ The history of architecture is similar, and some of the most provocative architecture was produced through the misreading of the Renaissance, and until the Rococo.

5: 6.1.1 Metamorphosis

The metamorphosis of Lucius begins when he arrives in Thessaly at the home of Milo. Having being warned by his foster mother, Byrrhena, of the sorcery of Milo's wife, Pamphile, and enamoured by Milo's maid, Photis, decides to take advantage of the maid to achieve his purposes. This is the simulation of love that begins the entire process of metamorphosis. Here, the event is not the amorous encounter per se, but a simulation. Lucius does not fall in love with Photis, but seeks sexual gratification in her, more specifically; she sustains within him a fetish for her hair. The same sort of fetish is encountered later in the *Hypnerotomachia*.

The fetish can be described very briefly as the superimposition of a primary arousal unto an objectified thing, the thing may be animate or inanimate, shoe,

⁷⁰ "Hence, all great "dialogues" in the history of philosophy were so many cases of misunderstanding: Aristotle misunderstood Plato, Thomas Aquinas misunderstood Aristotle, Hegel misunderstood Kant and Schelling, Marx misunderstood Hegel, Nietzsche misunderstood Christ..." S Žižek, *Organs Without Bodies: On Deleuze and Consequences*, Routledge, New York and London, 2004; also, S Žižek, *Series Foreword to The Monstrosity of Christ: Paradox or Dialectic* C Davis (ed.), The MIT Press, Cambridge MA and London, 2009

belt, breasts, buttocks, penis, etc. The objectification of Photis is so severe that he fails to consider her in any sort of subjective capacity.

While I was arguing the matter out with myself I had arrived at Milo's door, and proceeded [...]. I found neither Milo nor his wife at home, but only my dear Photis. She was getting dinner ready [...]. She was wearing a neat linen tunic, with a bright red waistband seductively gathered up high under her breasts. Her pretty hands were engaged in stirring the pot with a brisk circular movement, to which her whole body kept time in a sinuous response, while her hips and supple spine swayed in delightful undulating rhythm. I stood in amazement, my attention riveted, admiring the sight; and something else stood to attention as well. [...]. But I lingered there to drink in every detail of her appearance. As to the rest of her, I've nothing to say: it's only a woman's head and hair I'm really interested in. It's what I like to feast my eyes on first in the street, and then enjoy in private indoors.⁷¹

He continues by explaining his fascination and justification for hair, insisting that not even the naked body of the woman can compensate for the hair on her head:

If on the other hand - though it's blasphemy to even mention it, and I devoutly hope that such a thing will never happen to make the point - if you were to despoil the head of even the most beautiful of women of its

⁷¹ Apuleius, *The Golden Ass*, Penguin Books, London, 2004, pp. 25-26

hair and rob her face of its natural adornment, though she had come down from heaven, though she had been born from the sea and reared among the waves, I say though she were Venus herself, escorted by her choir of all the Graces and the whole tribe of Cupids, wearing her cestus, fragrant with cinnamon and dripping with perfumes - if she were bald, not even Vulcan would love her.⁷²

Even after he has made advances on Photis, and she has agreed to satisfy his urges, he reminds her of his desire for her hair; as if it were some extra being that sustains the sexual fantasy.

Lifting my tunic for a moment I showed Photis that my love could brook no more delay. 'Have pity on me' I said, 'and come to my rescue - fast. The war that you have declared without any diplomatic overtures will break out any minute now, and you can see I'm standing to arms and fully mobilised for it. Since I got cruel Cupid's first arrow right in the heart, my own bow has been strung so hard that I'm afraid it's overstrung and may break. But if you really want to please me, let your hair down when you come to bed so that it flows in waves all over us.'⁷³

Žižek notes the place, or more specifically the importance of the fetishised object, or fantasy in sexual pleasure, as it comes in as a substitute to protect from the trauma of the stupidity of the dull mechanical movements in sexual

⁷² Ibid. pp. 26-27

⁷³ Ibid. p. 30

intercourse and as a supplement that sustains enjoyment⁷⁴. Further, citing Lacan, he purports that this simulation via the presence of the partial object guarantees the impossibility of the One of the sexual couple, hence its disjunctive union as with Badiou of the Two. So, there is love as love, and love as simulation (sexual pleasure). Fidelity to the simulation is what will lead the protagonist to spiritual fulfilment; but, it is this form of fulfilment that is found in fundamentalism, this according to Badiou is the danger in a fidelity to the simulation, confused for the real of the *event*⁷⁵; it even utilises the same (war) metaphors, again found in Photis' response to his endearments:

'Now fight,' she said, 'and fight stoutly; I shan't give ground or turn tail. Attack head on, if you call yourself a man; no quarter given; die in the breach. There'll be no discharge in this war.'

In fidelity to their encounter, Photis informs Lucius about her mistress' (Pamphile) ability to transform into various animal forms and to perform various magical feats; he is enthralled by this and asks to be told when next she will perform one of her feats. After a while, Photis informs him that her mistress will be transforming into a bird, in pursuit of a lover, and that her role in this is

⁷⁴ S Žižek, *Organs Without Bodies: On Deleuze and Consequences*, Routledge, New York and London, 2004, p. 99; also S Žižek, *The Plague of Fantasies*, Verso, London and New York, 1997; and S Žižek *The Parallax View*, The MIT Press, Cambridge MA and London, 2006.

⁷⁵ See Badiou, *Ethics: An Essay on The Understanding of Evil*, op cit

to provide Pamphile with the antidotes upon her return, so she can return to human form. Pamphile turns into a bird and flies off, and Lucius is so overwhelmed that he asks to be turned also into a bird, but in her haste, Photis turns him into an ass. It is in his form as an ass that the rest of the story unfolds, with several interludes into various other stories. In keeping with the amorous encounter and its relationship to architecture, one such interlude that will be explored is the story of Cupid and Psyche.

5: 6.1.2 Cupid and Psyche

After his transformation into an ass, he enters the stables with all the other animals and is shortly abducted along with the others by a band of robbers. They are all loaded and saddled and set on their way. After a few ordeals, the bandits kidnap a girl who is set to be married and imprison her. To comfort her, the 'goalkeeper' tells the story of Cupid and Psyche.

Psyche is the youngest and prettiest of three girls born to a royal household. In their admiration of her, she is compared to Venus, and is venerated as the goddess by her parents and visitors alike. Her fame spreads abroad, and for this Venus is jealous; as a mortal is becoming her impostor and taking away the worship and adoration due her. As a result, she sends her son Cupid to avenge her and curse Psyche with ill fortune.

However, Cupid upon seeing her falls in love with her and sends the wind to take her away, but only after the oracle has confirmed that she is to be given in sacrifice. She is left on a cliff, where the wind picks her up and deposits her in a lush meadow, upon which she beholds Cupid's palace⁷⁶.

In this soft grassy spot Psyche lay pleasantly reclining on her bed of dewy turf and, her great disquiet of mind soothed, fell swiftly asleep. Presently, refreshed by a good rest, she rose with her mind at ease. What she now saw was a park planted with big trees and a spring of crystal clear water. In the very centre of the garden, by the outflow of the spring, a palace had been built, not by human hands but by a divine craftsman. Directly you entered you knew that you were looking at the pleasure-house of some god - so splendid and delightful it was. For the coffering of the ceiling was of citron-wood and ivory artfully carved, and the columns supporting it were of gold; all the walls were covered in embossed silver, with wild beasts and other animals confronting the visitor on entering. Truly, whoever had so skilfully imparted animal life to all that silver was a miracle-worker or a demigod or indeed a god! Furthermore, the very floors were divided up into different kinds of pictures in mosaic of precious stones: twice indeed and more than twice marvellously happy those who walk on gems and jewellery! As far and wide as the house extended, every part of it was likewise of inestimable price. All the walls, which were built of solid blocks of gold, shone with their own brilliance, so that the house furnished its own daylight, sun or no sun; such was the radiance of the rooms, the colonnades, the very doors. The rest of the furnishings matched the

⁷⁶ The nature of the description of his palace is similar to the descriptions we find in the *Hypnerotomachia*. See Apuleius, *op cit*, p. 77

magnificence of the building, so that it would seem very fair to say that great Jove had built himself a heavenly palace to dwell among mortals

She enters into the palace and is greeted by voices, reassuring her that all that she beholds in the palace belongs to her, and that they, the 'disembodied' voices are her attendants. The voice suggests to her to sleep of her fatigue and bath when she awakes, she will be served with refreshments. She does as she is told, and then true to the voice, a banquet of various courses, wines, refreshments, etc. is placed before her, borne by the wind, for there are no visible beings in attendance⁷⁷.

While Apuleius' account is fictional, it is known that in imperial Rome, architecture was a lavish affair for the Caesars. Suetonius (circa 70 AD) notes of Nero:

He built a house stretching from the Palatine to the Esquiline which he called the 'The Passageway', and when it burned down, he rebuilt it under the new name of 'The Golden House'. The following details will give some notion of its size and magnificence. A huge statue of himself, 120 feet high, stood in the entrance hall, and a threefold portico ran for a whole mile. An enormous pool, more like a sea

⁷⁷ The sort of extravagant architecture of Cupid's palace is consistent with some of the architecture of imperial Rome, exemplified in Nero's Domus Aurea, see Suetonius, The Twelve Caesars; also Boethius, A. The Golden House of Nero, in Some Aspects of Roman Architecture; The floating banquet table reappears in the renaissance, the table was connected to hoists, and lowered and raised to the service area below to change the courses of the meals, and to keep the servants out of sight, so that the person of the guest could be kept discreet. This table appears in the 18th Century, by Jean-Francois de Bastide in the novella Le Petit Maison, and by Claude-Nicholas Ledoux's in his house for the ballerina and courtesan Marie-Madeleine Guimard.

than a pool, was surrounded by buildings made to resemble cities, and by a landscaped garden consisting of ploughed fields, vineyards, pastures and woodlands - where every domestic and wild animal roamed about. Parts of the house were overlaid with gold and studded with precious stones and mother-of-pearl. All the dining rooms had ceilings of fretted ivory, the panels of which could slide back and let a rain of flowers, or perfume from hidden sprinklers, shower upon his guests. The main dining room was circular, and its roof revolved slowly, day and night, just like the sky. Sea water or sulphur water always on tap in the baths.⁷⁸

Returning to Psyche, following the banquet, she is entertained by a choir of invisible musicians after which she retires to her bed chamber and is visited by Cupid, these visitations become routine and pleasurable, but he never reveals his face to her, and warns that she must never try to look at him. But tempted by her sisters, and fuelled by her curiosity she looks upon him one night while he sleeps. Unfortunately, the oil from her lamp drops on him, and wounded, he awakens. Angry at her disobedience, he banishes her; by which time she is with child for him. Cupid is summoned by his mother Venus, and kept under guard, but as his wound heals and his vigour is restored, he forgives Psyche and goes in search of her. He finds her, avenges the treason brought by her sisters, killing them, and lives happily ever after with Psyche, much to Venus' chagrin. She subsequently abandons them and heads for the sea.

⁷⁸ Suetonius, *The Twelve Caesars*, Penguin Classics, London, 2007, p. 224.

Based on the premises of this investigation, this is the only concrete example of love from Apuleius in *The Golden Ass*; the erotic dimension to this is in what may be broadly term the excesses of the situation. The architecture of imperial Rome or of Nero is part of a general situation of excess, Nero is known for his unbridled cruelty, bordering on madness, of incest, debauched sexuality, matricide, etc. this is the context within which one must anticipate their creative forms. The reappearance of the 'palatial' form of architecture as a sanitised cradle of love falls into the category of simulation that was previously mentioned. This simulation occurs only in the presence of a partial object, fetish or fantasy. It is subsequently spiritualised and established as an 'Ideal' or enchanted form.

The final simulation of love in *The Golden Ass* takes the form of bestiality. *Lucius (still in the form of an ass) finds himself sold to a pair of brothers, one a pastry cook, the other a chef. They require him to transport their various containers, and treat him rather nicely. After a while, his human appetites begin to show up and he starts stealing of the various dishes that the brothers have prepared and stored. They are initially unaware of his roguery, and begin to accuse each other, but eventually discover him as the culprit, but rather than indignation, they are quite fascinated by his appetite for human food and report him to their fellow slaves until news of him eventually*

reaches their master. At this point, he is turned into something of a household pet, he is served at table and partakes of wine. His overall countenance begins to change and he is groomed accordingly, he is even taught a few tricks. Finally, he is made into a circus entertainer, and on one of the trips, while he is kept in his stables aboard a ship, a certain lady declares her love for him and asks his master to be alone with him. She is even prepared to pay his master for this privilege, to which he gladly accepts. Once in his stables, she makes a series of declarations of love and eventually copulates with him.⁷⁹ It is a sort of re-enactment of Pasiphae and the bull.

This 'affair' continues for a while, and his master decides that he will include such theatrics in his circus, however, as the woman in question is of high birth, such activities may not be made public, he thus finds a woman who has been condemned by the magistrates to use for this antic. On the designated day, Lucius, horrified by this despicable woman, (she has committed several murders including that of her husband),

⁷⁹ "Now the lady removed every stitch of clothing, even the band confining her beautiful breasts, and standing by one of the lamps she anointed herself with balsam from one of the pewter vessels which she also rubbed generously over me paying special attention to my nostrils. Next she kissed me lovingly, not the sort of kisses that pass current in the brothel, those of whores eager to extract money or clients as eager to withhold it; hers were the real thing and heartfelt as were her endearments - 'I love you', 'I want you', 'you're the only one I want', 'I can't live without you' and all the other things women say to excite men and prove that they care for them. Then she took hold of my halter and got me to lie down in the way I had learned [...]. Meanwhile she went on murmuring endearments and kissing me repeatedly and moaning tenderly and fluttering her eyelids seductively, and then finally, 'I have you' she cried 'I have you, my dove, my sparrow', and with that she showed me how empty and foolish my worries and fears had been. For holding me tightly embraced she welcomed me in - all of me, and I mean all.

"Apuleius, op cit, p. 185

runs away. He is lucky this time and has a vision where he sees the goddess Isis. She assists him with his transformation back to human form, and he devotes himself to her cult. After a series of initiations, he becomes a priest of Isis. This is how Apuleius' story ends.

5: 6.2 Gnosticism: Hermetic Philosophy

5: 6.2.1 The *Corpus Hermeticum*

The corpus Hermeticum begins with a declaration that God, the All is the Supreme Good, as He is formless and unbegotten (without substance); that he is first, before the world (cosmos, also the second God) and everything that is in it. That man is begotten of him, but comes third after the world, as such, is evil as he has taken on the corruptible form of the flesh and its desires; further, that even when man thinks he is good, his perception of good is only but a small portion of evil. It states that as such, man is composed of both an immortal being and a mortal being, but can only reach immortality by renouncing the flesh and its desires, but in order to renounce the flesh, man must first know the All.⁸⁰ Furthermore, it states that the world is full of evil, not that God is evil, but

⁸⁰ "Within man the Supreme Good is limited by the measure of evil. For in man just a little evil is counted as good. Good for him is the smallest portion of evil. Therefore for him, good cannot be free from evil. For in man goodness is ill-used, and when it is ill-used goodness no longer remains and when it does not remain, evil is born. Therefore the Supreme Good is only in God,

that the representation of the world by man, i.e., the perception of the world by man and its representation into form renders it evil apropos of a painting.⁸¹

Plato held the same view of the world and of the representation of things, which is why he loathed representational art, painting and sculpture.⁸² Deleuze and Guattari extend this logic of representational systems, to include the abstract machine of ideology which they argue, determines how things are perceived⁸³. They lay no claim to an Ideal, but base their argument on a form of empiricism, which Badiou argues is already contaminated by ideology⁸⁴. What may be attested to, in keeping with Deleuze and Guattari apropos of the nature of goodness and beauty, is that beauty and goodness as perceptive realities are nothing but statistical assemblages, based on an existing abstract machine,

or rather God himself is this Good. Thus O Asclepius, there is only the term 'good' for men, never its reality; for that is impossible. The gross body allows no room for it, bund fast everywhere by evil, toils, pains, desires, passions, deceits, foolish opinions. And, Asclepius, the worst is that each of these things which have just been mentioned, are in man considered to be the greatest good, whereas in fact each is an unsurpassable evil.

"Hermes Trismegistus, *The Corpus Hermeticum*, in *The Way of Hermes, Inner Traditions*, Rochester and Vermont, 2004, p. 38

⁸¹ "One must have the courage to say, O Asclepius, that the essence of God, if indeed He has an essence, is beauty; but no beauty and goodness are to be found in the things of the cosmos. For all things which fall under the eye are images and, as it were, paintings. But what does not fall under the eye is chiefly the excellence of beauty and goodness. And just as the eye cannot see God, so it cannot see beauty and goodness. For these are the attributes of God, perfect and complete, belonging to Him alone, they are His very own, inseparable and most beloved; either God loves them or they love God.

"Hermes Trismegistus, *The Corpus Hermeticum*, *ibid.* p. 39

⁸² See Plato, Part X: Theory of Art, in *The Republic*, Penguin Classics, London, 2007

⁸³ G Deleuze and F Guattari, *Capitalism and Schizophrenia: A Thousand Plateaus*, Continuum, London and New York, 2004, pp. 185-211

⁸⁴ A Badiou, *Deleuze: The Clamor of Being*, University of Minnesota Press, Minneapolis, 2000

which is itself external to perception.⁸⁵ Badiou thus argues that the thesis of Deleuze on immanence and becoming is centred on God and that his reduction of God to a transcendental One renders his thesis problematic; for Badiou, *'the One is not'* only the formless inconsistent Multiple, or the Nothing, incapable of the count as One is.⁸⁶ In a sense, there is a similarity between the thesis of Badiou and of Hermes; being that for Hermes, the world takes on form because of the 'Word', for Badiou, as the Nothing (the inconsistent multiple) is all that is, only a 'declaration' can give form to any notion of 'world'. The difference between Badiou and Hermes or even Plato, is that Badiou accepts the evil nature of man apropos of the declaration, as the truth of humanity. Similarly, he sees the production of images (art) as a philosophical truth (good), in as much as it presents the infinite of a mutiple, and not the multiplicity itself as an aesthetic reduction (of the abstract machine/ representation).⁸⁷

The purpose of the exploration into Hermetic Philosophy is in a bid to reveal the structure of the Hypnerotomachia, where love is simulated in absolution of

⁸⁵ G Deleuze and F Guattari, *Capitalism and Schizophrenia: A Thousand Plateaus*, op cit

⁸⁶ A Badiou, *Being and Event II: The Logic of Worlds*, op cit, pp. 381-388; His thesis of the Multiple and the count as One is the subject of his set-theory ontology, which he developed extensively in *Being and Event*, op cit

⁸⁷ A Badiou, *Art and Philosophy*, in *Handbook of Inaesthetics*, 2005, pp. 1-15

sexual desire, since according to the Gnostic belief, carnal desire is a form of evil, and evil is the nature of man.

According to Hermes, the cosmos has demons which also receive illumination from God, and in the friction of its movements creates different generation of men on Earth (different and distinct from world); some bestowed with the seeds of God, virtue, self-control, etc.; others with the seeds of demons, murder, suicide, adultery, etc. Also, the cosmos is the instrument for the making of bodies (planets, particles, etc.), it creates these bodies through its movement and through periodically dissolving them transforms and renews them.⁸⁸ The cosmos is thus, the creator of man, bodies and creatures; however, of all of these, only man is divine, for he is made in the image of God. But, the cosmos is not perfect.⁸⁹

After describing the nature of the cosmos, Hermes discusses the nature of mortality and immortality, of the essential nature of man as immortal, of death

⁸⁸ Ibid. pp.43-44

⁸⁹ "Furthermore, in each and every compound body there is number. For without number it is impossible for combination, composition or dissolution to occur. The One in each brings forth number and increases it, and again dissolving it, receives it into itself, while matter remains one. This entire cosmos, this great god, which is an image of the greater, with whom it is united, preserves the order and will of the Father and is the abundance of life. In this cosmos, throughout the eternal cycle of ages, which issues from the Father, there is nothing, neither of the whole nor of any part, that does not live. In the cosmos not one dead thing has come to be, is, or will be. For the father willed that as long as long as it exists it should be a living being. Therefore the cosmos must needs be a god also.

"Ibid. p. 62

as dissolution leading to mixture, transformation and rebirth and of the movement of the soul just as the earth and the cosmos move. In the final books, he discusses how one may gain illumination, i.e., how one may claim this immortality and become one with God, that because of the corruption of the mortal body, many are not aware of their immortality; at this point, Hermes names ten procedures to immortality,⁹⁰ which are designed to counter the twelve of the zodiac that restrain man to his mortality, and this struggle it would seem are the carefully disguised contents of *The Golden Ass* and of the *Hypnerotomachia*. In fact, the explicitness (of lust, venereal desire and 'inflammation', etc.) within the *Hypnerotomachia*, demonstrate this struggle, it may be argued that Lucius is turned into an ass, because of his impiety and eagerness to give into lust; thus only upon rejecting the vices which has held him captive does he receive deliverance by Isis. The genius of the

⁹⁰ "Rejoice now, O son, being thoroughly cleansed by the powers of God, you are thus united with the Word. Knowledge of God has come to us, and therefore ignorance has been banished. Experience of joy has come to us, and therefore, O son, sorrow will flee to those who give place to it.

After joy, the power I summon is self control; most welcome power, let us gladly receive her too, my son; on her arrival see how she drives off intemperance. Now I call the fourth, steadfastness, the power opposed to lust. This next step, O son is the seat of justice. See how without trial she has chased out injustice. With injustice gone we become just. I summon the sixth power, generosity, opposed to greed. With greed gone, I next summon truth, deceit flees, and truth is present. See how upon the arrival of truth the Supreme Good arises; envy has fled far from us. The Supreme Good, together with life and light, has followed upon truth, and the torments of darkness no longer fall upon us, but conquered, they all fly off with a rush of wings. You know now, O son, the manner of rebirth. And with the arrival of these ten, spiritual rebirth is complete [...], and by this birth we have become divine." *Ibid.* p. 67

Hypnerotomachia it seems is that unlike *The Golden Ass* written fourteen centuries earlier, it is crafted under the sign of Venus.

5: 6.2.2 *The Asclepius*

The *Asclepius* bears many similarities with the *Corpus Hermeticum*; however, it elaborates additionally on the structure of the cosmos, gods, the horoscopes, love, and magic. Accordingly, there are thirty-six horoscopes corresponding to the twelve signs of the zodiac, each zodiac having three constellations that are always fixed in place as seen in the 'heavens'; love is considered as the mystery of procreation, the incomprehensible union of two, and the pouring in of fertile power; magic, is about the invocation and creation of gods and demons, these can be done using herbs, stones and spices, further that one may invoke these gods to animate statues.⁹¹ In Gnosticism generally, there is a system of sympathetic magic, talismans, invocations. Yates states:

The methods of sympathetic magic presuppose that continual effluvia of influences pouring down onto the earth onto the earth from the stars of which *Asclepius* speaks. It was believed that these effluvia and influence could be canalised and used by an operator with the requisite knowledge. Every object in the material world was full of occult sympathies poured

⁹¹ See C Salaman (ed.), *Asclepius: The perfect Discourse of Hermes Trismegistus*, Duckworth, London, 2007

down upon it from the star on which it depended. The operator who wished to capture, let us say, the power of the planet Venus, must know what plants belonged to Venus, what stones and metals, what animals, and use only these when addressing Venus. He must know the images of Venus and know how to inscribe these on talismans made of the right Venus materials and at the right astrological moment. Such images were held to capture the spirit or power of the star and to hold or store it for use. [...]. The magician was one who knew how to enter into this system, and use it, by knowing the links of the chains of influences descending vertically from above, and establishing for himself a chain of ascending links by correct use of occult sympathies in terrestrial things, of celestial images, of invocations and names, and the like.⁹²

Thus, in a Deluzian 'becoming-sorcerer'⁹³, the entire Hypnerotomachia is a magical system under the sign of Venus, by Francesco Colonna. The specific system, is a subject of the art of memory, and is contained in the diagrammatic representation of the 'Thirty-Six Horoscopes' under the domination of the seven (visible to the eye) planets. Citing Hermes from the Stobaeus fragments, Yates states the importance of the Thirty-Six:

⁹² F Yates, *Giordano Bruno and the Hermetic Tradition*, Routledge, London and New York, 2002, p. 48

⁹³ A 'becoming-sorcerer' is recourse to sympathetic magic, where the understanding of religious ritual and oracular logic is applied in narrative; this is device used amongst others, by Borges. See G Deleuze and F Guattari, *A Thousand Plateaus*, Continuum, London and New York, 2004, pp. 264-278

We have said, my child, that there is a body which envelopes the whole ensemble of the world: you should represent it to yourself in a circular figure, for thus is the All.

I represent to myself such a figure, as you say, O father.

Represent now to yourself that, below the circle of this body, are ranged the thirty-six decans, in the middle between the universal circle and the circle of the zodiac, separating these two circles, and, as it were sustaining the circle of the All and circumscribing the zodiac, moving along the zodiac with the planets, and having the same force as the movement of the All, alternatively with the Seven... Pay attention to this: since the decans command over the planets and we are under the domination of the seven, do you not see how there comes to us a certain influence of the decans, whether through the children of the decans, or through the intermediary of the planets?⁹⁴

The graphic representation of the Thirty-Six is what is known as the memory or magic system, and has had various manifestations, including one based on Giordano Bruno's *De umbris idearum* (*Shadows*)⁹⁵, also "*The Memory Theatre of*

⁹⁴ Ibid. pp. 49-50

⁹⁵ See F A Yates, *The Art of Memory*, Pimlico, London, 1992, Plate 12

Giulio Camillo based on L'Ideadel Theatro"⁹⁶ and Francesco Colonna's "Diagram of the Isle of Cytherea."⁹⁷

With some confidence, it can be asserted that the *Hypnerotomachia* is about achieving illumination and immortality through sexual union. The eroticism therefore, in keeping with Summerfield⁹⁸, is nothing short of a Masonic initiation, beginning in chaos, complete with architectural references, and ending in illumination. Thus, love exists within the *Hypnerotomachia* in keeping with the Hermetic tradition, and it is concerned with procreation, struggle and the eternal movement of the cosmos through the copulation or interference of male with female;⁹⁹ it resorts to essentialism, and is predicated on the absolute transcendental Other.

5: 7.0 The *Hypnerotomachia*

The attachment of eroticism to sites, spaces, and ultimately to gardens and architecture, however, formed part of a longer tradition of writing and ritual, one first sketched in the allegorical divinations of the classics, and practiced in the temples of Priapic cults, but that was given its modern literary form in the

⁹⁶ Ibid. Figure 11

⁹⁷ See F Collona, *Hypnerotomachia Poliphili*: (trans. Joscelyn Godwin), Thames and Hudson, London, 1999, Appendix 4

⁹⁸ See G Summerfield, Introduction to D Vivant Denon, *D. Point de Lendemain* (No Tomorrow), op cit

⁹⁹ Deleuze notes this copulation (folding) of the male and female within the monad. See G Deleuze, *The Fold: Leibniz and the Baroque*, op cit

*Renaissance, with the publication of the Hypnerotomachia Poliphili in 1499. Here with the aid of detailed illustrations, the reader was invited to learn the secrets of ancient architecture through the pleasant conceit of a love poem.*¹⁰⁰

The definitive erotic text in architectural theory, *The Hypnerotomachia Poliphili* by Francesco Colonna was published in 1499 by Aldus Manutius. On the surface, it is the story of Poliphilo's adventures in search for, and in a bid to win the love of Polia. *In this case, love is sexual union. But as has been argued previously, if the nature of the quest for illumination or Masonic initiation required this ultimate consummation, and love, as has been defined previously is the confirmation of sexual non-connection, then clearly there is an impasse.* To reinforce this position, in his rendition of the *Hypnerotomachia*, Alberto Pérez-Gómez cites the preface by Leonardo Crasso of Verona to the Duke of Urbino¹⁰¹ in the original edition of the *Hypnerotomachia* published in 1499, stating that the *Hypnerotomachia* is in fact a 'memory system'.¹⁰² In the translation by Joscelyn Godwin however, it is not immediately clear, that what is being dealt with is a formal memory system,

¹⁰⁰ A Vidler, *Preface to The Little House, An Architectural Seduction*, Princeton Architectural Press, New York, 1996, pp.10-11

¹⁰¹ F Colonna, *Hypnerotomachia Poliphili: The Strife of Love in a Dream*, op cit, p. 2

¹⁰² "You should know that Poliphilo dreamed about being in a threatening dark forest and narrates the myriad things he saw, a veritable strife for love, which is the meaning of the Greek words in the title. With elegant style and great care, he tells of many ancient marvels deserving of a place in the theatre of memory, architectural monuments encountered in his search for Polia, his beloved..." A Pérez-Gómez, *Poliphilo or The Dark Forest Revisited: An Erotic Epiphany of Architecture*, introduction, The MIT Press, Cambridge MA and London, 1994, p. xi

although the contents of what might be termed a Masonic procedure are implicit.¹⁰³

The details of Poliphilo's adventures are similar to the claim by Summerfield about the accounts of a Masonic initiation and the references to architecture contained within the account; also the Trinity expressed in the sacred engraving of the Egyptians, can be attributed to the Hermetic influences previously discussed. If what has been inherited within architectural writing as erotic is in fact Masonic, or some other form of spiritualism or humanism, then it seems appropriate that a separate perspective be taken on the erotic, especially since it has had such a profound influence on architecture.

In what follows, the memory system used in the *Hypnerotomachia* will be demonstrated, following which an exploration of the nature of sexual union in

¹⁰³ "Reader, if you wish to hear briefly what is contained in this work, know that Poliphilo tells that he saw remarkable things in a dream, hence he calls the work in reek words 'the strife of love in a dream.' He represents himself as having seen many ancient things worthy of memory, and everything that he says he has seen, he describes point by point in the appropriate terms and in an elegant style: pyramids, obelisks, huge ruins of buildings, the varieties of columns, their measurements, capitals, bases, epistyles or straight beams, bent beams, zophori or friezes, and cornices with their ornaments. There is a great horse, an enormous elephant, a colossus, a magnificent portal with its measurements and ornaments, a fright, the five senses represented in five nymphs, a remarkable bath, fountains, the palace of the queen who is Freewill, and an excellent royal feast. He tells of the variety of gems or precious stones, and their nature, [...]; three gardens, one of glass, one of silk, and one a labyrinth, which is the human life; a peristyle of brick in whose centre the Trinity was expressed in hieroglyphic figures, that is, in the sacred engraving of the Egyptians; the three portals before which he tarried; Polia, her appearance and behaviour.

"J Godwin, *Hypnerotomachia Poliphili*, op cit, p. 5

relation to the erotic, and its influence on later architectural writing on the erotic as decadence. The general claim will be made that the architecture which exists within the writings of de Sade: the dungeons, prisons etc. are in direct opposition to the virtuous spirituality of the Renaissance, and not an opposition specifically to rational man and Reason. Thus the dark and torturous spaces of Sade are completely reactionary forms. A resurrected form, by way of Sacher-Masoch, reveals the more intricate details of architecture within the construct of love, however, even in Masoch, love is simulated under the form of a contract, and the entire Masochist system is a performance¹⁰⁴.

5: 7.1 The Theatre of Memory

The art of memory can be traced back to three sources, Simonides (circa 556 BC), Hippias (circa 460 BC), and Aristotle (384 BC)¹⁰⁵. It involves the committing to memory of things, objects and ideas using a combination of visual and literary devices (A is for Apple, with the image of apple attached, etc.), to more complex devices of entire narratives based on references to signs and other symbolic devices. However, for the purposes of this enquiry, the art of memory being employed is based on the transcription of the horoscopes and planets onto the

¹⁰⁴ See S Žižek, *The Metastases of Enjoyment: Six Essays on Women and Causality*, Verso, London and New York, 2005, pp. 89-94

¹⁰⁵ See F A Yates, *The Art of Memory*, op cit

circular or semi-circular form of the theatre; it is called the 'Theatre of Memory', and is based on Giulio Camillo's representation of the channelling of the creative life force of the cosmos in the Hermetic tradition. As previously mentioned, this system is based on the thirty-six horoscopes; the twelve signs of the zodiac, each bearing a constellation of three stars under the domination of the seven planets (Mercury, Venus, Mars, Jupiter, Saturn, Apollo (the sun), and Diana (the moon)). In the *Hypnerotomachia*, Poliphilo is ruled by Venus, as such, his erotic adventure under the sign of Venus¹⁰⁶ will be traced. The closest memory device available for the purposes of this is Camillo's Theatre, based on a distortion of the roman theatre by Vitruvius¹⁰⁷. It is in the form of an amphitheatre, with seven concentric arcs, representing seven stages, each with a single gate; seven sections representing the seven planets, with one planet dominating each section from the lowest part of the theatre to the highest; and the constellations at each of the gates.

He is using the plan of the real theatre, the Vitruvian classical theatre, but adapting it to his mnemonic purposes. The imaginary gates are his memory places, stocked with images.¹⁰⁸

¹⁰⁶ See J Godwin, Introduction, *Hypnerotomachia Poliphili*, op cit. p. vii

¹⁰⁷ F A Yates, *The Art of Memory*, op cit

¹⁰⁸ Ibid. p. 141

Each of the seven gates and their significance has been illustrated by Yates in *The Art of Memory*, beginning at the bottom with the middle celestial world, and proceeding in either direction to the super-celestial world of angels, or the sub-celestial world of astral influences.

Thus, following the custom in ancient theatres in which the most important people sat in the lowest seats, Camillo has placed in his lowest grade the seven essential measures on which, according to the magico-mystical theory, all things here below depend, the seven planets. Once these have been organically grasped, imprinted on memory with their images and characters, the mind can move from this middle celestial world in either direction; up into the supercelestial world of the Ideas, the Sephiroth and the angels, entering Solomon's Temple of Wisdom, or down into the subcelestial and elemental world which will range itself in order of the upper grades of the Theatre (really the lower seats) in accordance with the astral influences.¹⁰⁹

The gates have the same inscriptions; however, the constellations within them all vary, depending on the relationship between the planet and the gate at either stage. Returning to Venus, the first gate under the influence of Venus has the constellation: Hod, Nisach (Netzach/ Nesah), Honiel. From the Kaballah the combination of Sephiroths, Nisach and Hod are the primary motivations for

¹⁰⁹ Ibid, p. 143; the description of the memory system which follows, is derived from Camillo's Memory Theatre in Figure 11

struggle based on one's passions. It consists of endurance, fortitude and patience. It is militant, and it represents the labour and pain of the outpouring of life. Nisach stands for endurance in earthly love.¹¹⁰

While Poliphilo's path is dominated by Venus, he has to make his way through the labyrinth of all the other planets; the way of Venus is rife with tribulation. It must be recalled that love as represented under the sign of Venus is already a simulation, and that even though it bears a resemblance to love as truth procedure, it remains a semblance, thus its recourse to fetish or spiritualisation as the external component required for the creation of the illusion of sexual union, thus the emphasis in Gnosticism of procreation.

In the Hypnerotomachia, the second stage (as with Camillo's theatre) under the influence of Venus is marked by The Banquet; it signifies the first day of

¹¹⁰ "He drew forth a third name, called the image of the Written Torah, and it is the hue of a white fire. He brought forth from it three droplets of one light which divided and transformed itself into three powers of light: Urpani'el changed to Pani'uri'el changed to Re'upani'el. From the first light the throne of Glory was created. This throne itself is a throne to the upper Throne and in it is encompassed all the crowns which are below the upper Throne of Glory, established on the basis of Lovingkindness, Strength, and Mercy (*rahamim*). From the second light the world to come was created, a world of Severity (*din*) and Mercy, these being the qualities of the Kingdom (*Malkhut*), where punishment and reward are found. From the third light this world is created

The first light first light is a light which glitters and explodes into the last throne of Glory, which contains three types of luminaries - or say three crowns - the Foundation (*yesod*) of the world, Endurance (*nesah*) and Majesty (*hod*). Now this light is a light which comes and goes, glittering from the crown of Mercy, at times revealed and at times concealed.

"Rabbi Isaac, The Mystical Torah - Kabbalistic Creation, in The Early Kabbalah, J Dan and R C Kienre, (eds.), Paulist Press, New York and Mahwah, 1986, p. 75

creation from the Word, the first form of emergence from the 'Waters'¹¹¹. It is constituted by a 'Sphere with Ten Circles, the outermost one being golden: the Elysian Fields, the terrestrial Paradise'.

*In short, the second grade of the Theatre is really the first day of creation, imagined as a banquet given by Ocean to the gods, the emerging elements of creation, here in their simple unmixed form.*¹¹²

The third stage is marked by The Cave; it is the stage where each of the elements of creation begins to mix. It is constituted by 'Cerberus: things appertaining to hunger, thirst, and sleep'; 'The Girl with the Vase of Odours: odours'; 'Hercules Cleaning Aegean Stables: things clean by nature'; 'Narcissus: beauty of things in this world'; 'Tantalus under the Rock: vacillating or impending things'. The fourth stage is marked by Gorgon Sisters. This stage marks the creation of the mind and soul of man, here, man appears in the image of God, it is constituted by 'Eurydice Stung on the Foot by a Serpent: human will; the affections governed by the will'. The fifth stage is marked by Pasiphae and the Bull, in this stage, the immortality of man is compromised by its taking on the corporeal

¹¹¹ The Revised Standard Version, the Bible, Genesis 1:1. In the beginning God created the heavens and the earth. The earth was without form and void, and darkness was upon the face of the deep; and the Spirit of God was moving over the face of the waters. Also, the Gospel according to St. John 1:1. In the beginning was the Word, and the Word was with God, and the Word was God.

¹¹² F A Yates. The Memory Theatre of Giulio Camillo, in *The Art of Memory*, op cit, p. 144

form of the body, its desires and passions. It is constituted by 'Cerberus: hunger, thirst, sleep'; 'Hercules Cleaning Augean Stables: cleanness of the body'; 'Narcissus: beauty of the body, love, desire'; 'Bacchus with Ivy Crowned Spear: enjoyment, leisure, gaiety'; 'Minotaur: nature inclined to vice'; 'Tantalus under the Rock: timid suspicious nature'. The sixth stage is marked by Sandals of Mercury, the operational stage of man, where he acts according to necessity, and not to training or the development of skill. It is constituted by 'Cerberus: eating, drinking, sleeping'; 'Hercules Cleaning Aegean Stables: purging, cleaning'; 'Narcissus: making beautiful, making desirable'; 'The Girl with the Vase of Odours: perfuming'; 'Bacchus with Ivy Crowned Spear: enjoying oneself, laughing'; 'Tantalus under the Rock: causing to vacillate, to tremble'; 'Minotaur: vicious operations'. The seventh stage is marked by Prometheus, the stage of the development of man, his arts, tools, weapons, laws. It is constituted by 'Cerberus: cooking, banquets, sleeping arrangements'; 'Silk Worms: arts concerned with clothing, weaving, dyeing, tailoring' 'Hercules Cleaning Aegean Stables: arts of cleansing, baths, bathers'; 'The Girl with the Vase of Odours: perfumery'; 'Minotaur: vicious arts, ruffianism, brothels, arts of prostitutes'; 'Bacchus with Ivy Crowned Spear: music and games'; 'Narcissus: art of cosmetics'.

Poliphilo's journey will begin under these stages governed by Venus to demonstrate its relationship to the Hermetic/ Gnostic memory system.

5:7.2 Poliphilo

Poliphilo's story begins with him lying on his couch, remarking on the brilliance of the new day and lamenting his suffering insomnia¹¹³. Shortly afterwards, he falls asleep and finds himself in a thick forest; he is terrified. It is of some significance that before he falls asleep, he laments his scorned affection for Polia, and begins to imagine ways of sustaining unreciprocated affection. Afterwards he falls into a long and sustained dream, the details of which are the subject of the novel. It can be said from the beginning, that the author makes it clear the narration is a pure simulation, bearing only semblance to the 'truth' of love. His dream begins with him in what he considers the Black Forest (the vast Hercynian Forest¹¹⁴), a place of darkness and unspeakable evil. This corresponds with the first day of creation, primordial chaos - 'and darkness was upon the face of the deep'.

2nd Day of Creation: 'Cerberus: things appertaining to hunger, thirst, and sleep'; 'The Girl with the Vase of Odours: odours'; 'Hercules Cleaning Aegean Stables: things clean

¹¹³ Recall Alice sitting in the garden with nothing to do; L Carroll Alice's Adventures in Wonderland, op cit.

¹¹⁴ F Colonna, Hypnerotomachia Poliphili: The Strife of Love in a Dream, op cit, p. 14

*by nature'; 'Narcissus: beauty of things in this world'; 'Tantalus under the Rock: vacillating or impending things'*¹¹⁵

Poliphilo continues his journey through the labyrinth that is the dark forest into a numbing brightness; he is exhausted and covered in bruises, but his immediate desire is to quench his burning thirst.

I felt lifeless, and hardly seemed to recognise the gracious light that was before me. My thirst was so great that the fresh breezes could not cool me or satisfy my parched heart: I tried in vain to swallow my own saliva, but that had dried up too. [...], I decided that I must at all costs satisfy my burning thirst. Therefore I searched the tract carefully in the hope of finding some water, and was very tired of exploring when a glorious spring presented itself to me, gushing forth a great vein of fresh water. Around it grew sweet-flags and half-concealed plantains, flowering loosestrife and tufted imperial; and a clear stream arose from it that wandered with its tributaries through the deserted forest in an unkempt and winding channel.¹¹⁶

Again, this corresponds with the Camillo's third stage, which is the second day of creation. What follows is that after more rumination, Poliphilo hears music

¹¹⁵ The italicised text, regarding the days of creation, is a reference to the illustration of Giulio Camillo's Memory Theatre, in F A Yates, *The Art of Memory*, op cit., Figure 11, p. 345. It is followed by a continued description of Poliphilo's adventure and some commentary, and by a reference to the relevant portion of the *Hypnerotomachia* which corresponds to Camillo's Memory Theatre.

¹¹⁶ F Colonna, *Hypnerotomachia Poliphili: The Strife of Love in a Dream*, op cit, p. 16

and heads in its direction, but he is so greatly distressed about his situation and exhausted by his travails that he falls asleep.

I remained in these painful agitations, my strength at its lowest ebb, finding no help but in the steady and frequent gasping of air, collecting it in my breast where a particle of vital heat still throbbed and warmed it, and exhaling it through my throat as though retching. I felt no more than half-alive as I took as my last comfort the damp and dewy leaves that lay beneath the fronded oak, pressed them to my pale, cracked lips, and greedily sucked the moisture from them to cool my parched throat. [...]. For I was beginning to suspect that I had been bitten in the vast forest, without noticing it, by the dipsas snake, so unbearable was my thirst. In the end I renounced my weary and outlawed existence, abandoning it to whatever should chance. Stunned and mindless after my heavy thoughts, indeed almost insane, I staggered beneath the oak-tree's shade and the comfortable spreading cover of its branches. An overwhelming drowsiness came over me, a sweet lassitude spread through my members, and it seemed to me that I slept again.¹¹⁷

3rd Day of Creation: 'Eurydice Stung on the Foot by a Serpent: human will; the affections governed by the will'

This stage represents man in the image of god and the indubitable force of his creative will. He wakes and continues his wanderings, and finds himself in

¹¹⁷ Ibid. p. 19

more pleasant surroundings, the trees are not too high, there are no immediate threats, everything that he encounters meets him with delight; he encounters a wolf and is almost petrified, when the carnivorous beast saunters off. Looking on, he encounters an obelisk in white Parian marble, other architectural ruins from antiquity, and various weeds and reptiles; he gets to a portal with a large pyramid beyond, on top of which was a rotating statue. Poliphilo is totally awed by this image, that he commends the genius of man.

What bold invention of art, what power and human energy, what organisation and incredible expense were needed to hoist this weight so high into the air, to rival the heavens? What capstans and pulley blocks, what cranes, compound pulleys, frameworks of beams and other lifting machines? It was enough to silence every other structure, however large or incredible.¹¹⁸

Poliphilo describes the nature of the architecture, the details of the sculptural elements and the emotions they invoke in him; in all, his fascination is with the ingenuity of the creators of these spectacles.

Recall the earlier claim by Summerfield of the importance of architecture and especially the place of chiaroscuro and the manipulation of various lighting effects within Masonic rites, then with some certainty her position is agreeable, especially as the reference to

¹¹⁸ Ibid. p. 25

*lighting and effect occurs within the stage dedicated to the creative will of man and his likeness to God.*¹¹⁹

The ingenious and gifted architect had displayed the highest degree of intellect by creating a number of lighting channels which corresponded to the movements of the sun, illuminating the three sections: lower, middle, and higher. The lower part was lit by channels above it, the upper part by those below it, which together with some reflection from the opposite walls gave sufficient light. The clever mathematician had calculated the exact placement of these in the East, South and West faces, so that at every hour of the day the winding stair would be brightly lit.¹²⁰

What follows are more descriptions of architecture, measurements, zophori, ornaments, and the lifelike character of the sculptures and sculptural engravings. He returns to the pyramid and goes into considerable detail, describing the gigantomachy at its base, and especially the details of a battle scene, giants and their armour, spears, shields, chariots, horses and all. Again, he is left in awe as to the workmanship and technology that must have been available to those of antiquity to produce these great works, likening them to gods, because as he states, "human knowledge, together with the greatest talent and capacity could not gain such audacity in the art and artifice of building, nor

¹¹⁹ See footnote no. 64

¹²⁰ Ibid. p. 28

even think of it.”¹²¹ One is tempted in haste to conclude that the entire journey, given the initial premise, is about the pursuit of illumination, with the amorous figure of Polia as an abstract element and not an actual subject; when amidst his love for architecture, Poliphilo remembers Polia his ‘celestial ideal’ and devotes only one sentence to her before returning to architecture. As in the masochist theatre which is discussed later, Polia is an Idealised object, the unapproachable Woman, which can never constitute the ‘real’ of an emotional engagement and can only be engaged with through a contractual apparatus; in the *Hypnerotomachia*, that apparatus is marriage, this is confirmed initially by Polia being a devotee of Diana (goddess of chastity, the hunt, and marriage), their banishment from her temple when they are found in an amorous embrace, and their final nuptials at the altar of Venus, replete with liturgy and transubstantiation.

Returning to Poliphilo’s journey, he devotes the next few sections of his adventure to the admiration of architecture and the representation of human genius shown on the various sculptures and zophori, and the magnificent workmanship of antiquity; also, he encounters certain cryptic inscriptions telling him of time, loss, misfortune, and toil. After some more descriptions involving

¹²¹ Ibid. p. 30

architectural proportions he concludes by lamenting the inability of moderns to learn from the beauty of nature as was done in antiquity, the need for perfection in the art of architecture, and the supremacy and role of the architect in relationship to the other labourers.

4th Day of Creation: 'Cerberus: hunger, thirst, sleep'; 'Hercules Cleaning Aegean Stables: cleanness of the body'; 'Narcissus: beauty of the body, love, desire'; 'Bacchus with Ivy Crowned Spear: enjoyment, leisure, gaiety'; 'Minotaur: nature inclined to vice'; 'Tantalus under the Rock: timid suspicious nature'

The architectural obsession continues with him entering a portal, where he experiences more architectural antiquity, with the marked difference that the new forms are descriptive of various earthly desires, including Pasiphae and the wooden contraption with which she consummated her love for the bull, and their offspring, the Minotaur. On exiting the portal, he is confronted by a dragon, filled with despair; he flees into the darkness, where he is again met by a labyrinth. He laments his anguish, and his love for Polia, and after appealing to the gods, he sees a faint light. Filled with hope, he begins to make his way to this source of illumination.

How I hurried joyfully towards it without another thought, [...]; and as soon as I saw it, I felt so much joy and desire that I gladly revoked my

former contempt for my unpleasant and burdensome life, and calmed my unsettled mind and wavering soul. As I recovered somewhat, confidence began to return to my empty and loveless heart and filled it to the brim with burgeoning love, while its lost and exiled thoughts returned to their pristine state.¹²²

On reaching it, he is once more filled with hope and the pangs of love for Polia, and resolves himself to honouring and adoring her.

O how extremely I tortured myself! I did not resist any of love's new boiling and burnings which my long-suffering and besieged heart might harbour, but, seeing every hampering obstacle removed and every assault ceasing, I opened myself to them and welcomed them freely in.¹²³

Poliphilo leaves the sanctuary and while he celebrates his fortune, he enters a pleasant landscape with a stream of fresh water, further on he finds a fountain with a carving of a voluptuous nymph with her nipples serving as drinking spouts, some satyrs and a pan. He makes an erotic description of the nymph, her breasts, her thighs, the pout of her mouth, etc. comparing it to a certain fountain of Venus, which men were known to masturbate to. Beneath the fountain, he finds the inscription: 'The Mother of All'. What follows is a burning

¹²² Ibid. p. 65

¹²³ Ibid. p. 65

thirst, to which he is unsure whether it is for a need of water, or if it is influenced by the beauty of the source.

While he is contemplating his thirst, he notes the fruit bearing trees around him and the sudden clatter of approaching company. It turns out to be an entourage of five nymphs. He describes their clothes, shoes, breasts, hair etc. He relates his travels to them, and taking pity on him, they invite him to join them at the baths, where they subsequently all amuse themselves. On their way, Poliphilo is so inflamed by the nymphs that he begins to plead with them. This leads to them first teasing him, then running around, till they all fall into each other and satisfy their desires.

The rest of the book takes on similar tones: he is taken to meet their superior, there is more banqueting, bathing and perfuming; accompanied by reason and desire, he is advised on the journey ahead of him; he faces three portals in his quest for Polia, one of labour, one of militant struggle, and one of passion - he chooses the route of passion; he finds Polia who slowly reveals herself to him; he is taken to the temple of Diana, he is filled with desire, they enter into an amorous embrace, and finally, at the altar of Venus, they are married - in all this, there is a celebration of architectural detail. The book as such may be considered erotic, but fundamentally, it is based on a memory system governed by Venus,

and is an initiatory process leading to illumination, a Masonic initiation; in Deleuzian terms, a veritable becoming-sorcerer. As such, while the erotic undertones are quite explicit, the story hardly classifies as a love story. However, the Hypnerotomachia set the pace for what became known as erotic writing in architecture. This form of architectural writing influenced much of 18th century architecture and landscape architecture, but it had lost its spiritualism. Further, given the importance that was now given to education, the manifestation of this could be seen in a new literary form which combined the erotic novella and the architectural treatise, to which such works as Bastide's *La Petite Maison* can be affirmed.¹²⁴ The novella by Bastide fits into a larger tradition of pedagogical writing which used the erotic as subject matter in approaching other issues of political or philosophical intent. In this regard, there are also the libertine novels (Huysmans' *À Rebours, or Against Nature*; Wilde's *The Picture of Dorian Gray*, etc.) and the reactionary writings of de Sade. Incidentally, some of Sade's most popular works: *Justine*, *Philosophy in The Boudoir*, and *120 Days of Sodom*, while not considerably architectural, in the manner of the Hypnerotomachia or *La Petite Maison*, are replete with architectural references. Thus, given the claim that architecture is an assemblage which includes the

¹²⁴ See A Vidler, Preface to, *The Little House: An Architectural Seduction*, Princeton Architectural Press, New York, 1996

architectural object (fold within a fold), the work of Sade may be considered architectural. In what follows, the transition of architectural writing will be demonstrated.

5: 8.0 The Erotic Novel and Architecture

Rodolphe el-Khoury opens with the following introduction to *The Little House*:

Jean-Francois Bastide's *La Petite Maison* belongs to an eighteenth-century literary genre combining fictional narrative with didactic observation on art and architecture. [...]. The hybrid genre is often construed as a pedagogical device aimed at potential patrons who possessed material wealth and social status but lacked the necessary instruction for the appreciation of finer architecture. *La Petite Maison*, an intersection of the libertine novel and critical commentary on architecture, could certainly claim a wider readership among a lay audience. But beyond marketing strategy and pedagogical aim, the mixture of genres fulfils literary and philosophical ambitions: the conjunction of aesthetics and eroticism sets up a narrative and theoretical framework for demonstrating much-debated theses on sensation, affect, and desire.¹²⁵

According to el-Khoury, the *petite maison* was a specific building type, 'used as secluded quarters for clandestine encounters'; he states that while many do not exist anymore, records of some, such as the house for the courtesan Marie-

¹²⁵ El-Khoury, R. Introduction, *The Little House: An Architectural Seduction*, op cit, pp. 19-20

Madeleine Guimard and various police reports, suffice to evoke their memory and the importance they assumed in the staging of libertinage¹²⁶. Again, this is the arena of sex, directly anathema to the arena of the Two. As has been argued earlier (6.0), this scenario can be traced to the simulation of sex as love; however, it finds its logical conclusion in libertinage (8.2). Sade's tale of libertinage proves beyond doubt as the difference between the two positions of sex and love. In fact, in Sade, libertinage takes on a purely pedagogical form.

The *petite maison* according to el-Khoury derives from a slippage, *folie*, meaning madness, but will later connote pavilion. The use of *folie* to indicate the place of these clandestine encounters, was based on the social perception of these places, they were perceived as the town houses of lunatics, as libertinage could only be the practice of mad people. Subsequently, the term "Hôpital des Petites Maisons was the *residence de choix* for lunatics."¹²⁷

Bastide's novella narrates the plot of a seduction which begins with a wager. The protagonist invites a young woman (who had never played the enchantress, nor been seduced) to his *petite maison* and convinces her that by the time she has experienced what his 'asylum of love' has to offer, she will be his. She

¹²⁶ Ibid. p. 21

¹²⁷ Ibid.

accepts the wager and visits him. He takes her through a series of lush landscapes, and then into an exquisitely crafted house, taking her through the various rooms and out to the private garden behind. They return into the house by which time the woman is overwhelmed by the opulence which she has just experienced, she falls for his antics, and is seduced. The plot bears some resemblance to Vivant Denon's *Point de Lendemain*, where the seduction takes place amid architectural references. In this case, the architectural references are elaborated upon in detail, giving the names of the gardeners, painters, cabinet makers, sculptors, etc. involved with the project. Further, the design procedure of the spatial programme is elaborated upon, and it is believed to have been inspired by the works and teachings of Jean-Francois Blondel on distribution.

La Petite Maison deploys a sequence of scenes where painting, sculpture, and ornament are staged in sensational tableaux of different tastes. The theatrical inspiration is clear and is also evident in the dramatic use of lighting and in the machinery of spectacle and illusion; the *table machinée*, or flying table, in the dining room and the illusory grove in the boudoir are notable examples.¹²⁸

In the staging of love in *Dido and Aeneas*, where the lovers union is consummated, there is the scenario of flaring torches, lighting, a thunder storm,

¹²⁸ Ibid. p. 30

and a retreat into a cave; in the staging of Psyche's abduction by Cupid, there is the scene of the magically floating banquet changed by invisible hands, and her elaborate bed-chamber. The similarities to the scenes of the *petite maison*, allow the conclusion that the influences from antiquity, while distorted to fit more pleasurable demands are nonetheless present, and with the references to sympathetic magic and Hermeticism, it can be agreed with Summerfield that Blondel's teachings, adapted by Bastide for the creation of spatial themes programmes and distribution can be traced to literature on initiatory processes. The conclusion of the novella is, however, more convincing of the amorous procedure than in the *Hypnerotomachia*, for, while the *Hypnerotomachia* ends in marriage, *la petite maison* ends in seduction, or more bluntly, in rape. Recall that Ovid likens the amorous procedure to the art of war; thus, the antics employed to guarantee sexual union may be seen as legitimate, but Ovid concludes generally with consensual union even when achieved through deceit; he generally discourages rape¹²⁹, but rape it seems is the logical conclusion to the simulation of love as sexual union. To elaborate on this, the details of *la petite maison* will be explored and then compared with de Sade's Philosophy in the Boudoir, where Sade expounds on the use of violence as a naturally

¹²⁹ See Ovid, The Art of Love, in The Erotic Poems, op cit

occurring procedure to win ones ends, be they seduction or otherwise; further, that in the sexual arena violence is often a mandatory precursor to pleasure. However, de Sade's architecture is usually dark, and forces one to consider the dungeon, cellar or prison as the only places capable of accommodating the violence which he argues is central to the erotic. It is Masoch who will help resolve this impasse, by resorting to spineless violence, under the auspices of the contract and the idealisation of Woman. Finally, in all of the above scenarios, the architectural object remains a single part of the overall assemblage.

5: 8.1 La Petite Maison

The story begins with Marquis de Trémicour and Mélite who happen to be acquainted, as the Marquis is said to have made numerous entreaties to which she had resisted, keen to declare her virtuous nature. Finally, he challenges her to visit his *petite maison* to which she concedes, stating her resolve to chastity.

Mélite had not been aware of the nature of these *folies*, imagining them to be nothing of significant beauty or taste, which to her surprise they were. The procession was an avenue which extended a good distance to the "gate of the grass covered forecourt"; the court was flanked with symmetrical yards on either side. "One contained a menagerie of wild and domesticated animals, as

well as charming dairy, decorated in marble and shells, and kept cool by abundant and pure waters that tempered the heat of the day.”¹³⁰ This yard also contained all the ancillary buildings and facilities required for the upkeep of the household. On the other side, was a kennel of dogs of various breeds, a double stable and a riding ring. These were all arranged in rustic pastoral order, screened by hedges which allowed openings to vast orchards and vegetable gardens.

Approaching the centre of the main courtyard, Mélite was taken completely by surprise as to the style and genius of the architect in arranging such beauty; it was surrounded by walls of fragrant plants and “exquisitely” proportioned so as to intimately contain them, but to also a view of the main building which lay ahead. Finally they arrived at the main salon which opened onto the garden.

He noticed Mélite’s delight and permitted her to pause and contemplate its finery. Indeed, so voluptuous was this salon that it inspired the tenderest feelings, feelings that one believes one could have only for its owner.¹³¹

All along, Trémicour had been trying to convince her to make haste in getting to the house, but his efforts had been thwarted by various protestations from

¹³⁰ R el-Khoury, *The Little House: An Architectural Seduction*, op cit, p. 58

¹³¹ Ibid. p. 67

Mélite, so as he witnessed the transformation in Mélite upon their arrival at the salon, he became reassured of his enterprise.

The salon was beautifully decorated with lilac panelling, crafted mirrors, and various painted scenes of love, and sculptures enhanced by various gildings. As it was getting dark, a valet came to light the candle chandelier which illuminated the salon. All of this had begun to affect the composure of Mélite, to the extent that she had begun to reconsider her position on coquetry, and her lack of skill at it, given that she had spent all of her time in more virtuous pursuits; she was even now praising Trémicour's taste for the finer things.

They left the salon and entered the bedroom on the right; it had "a jonquil-colored bed of Peking fabric, brocaded with resplendent hues, lay nestled in a niche, across from one of the windows that overlooked the garden."¹³² It had chamfered corners graced by mirrors, and was crowned with a vaulted ceiling. The walls were painted yellow, it had Turkish blue marble and a many other embellishments. Mélite was distressed. The next room proved even more hazardous, as it was an elaborately decorated boudoir, whose walls were covered with mirrors, and tree trunk patterns which concealed the joinery, numerous chandeliers whose candle lights reflected of various mirrors to

¹³² Ibid. p. 74

provide a magical optical effect. Further, with all the special effects in the boudoir, Trémicour had arranged for musicians to play. Méliste was mute with delight. Further details of the carefully crafted asylum of love are given, including the various forms of trickery employed by Trémicour to increase Méliste's trepidation. He even arranged for a canon to go off, such that she would tremble and allow him the opportunity to hold her in a comforting embrace. After the canon, he also arranged for an elaborate display of fireworks. By this time, Méliste had become so enraptured by the situation, that she had totally dropped her guard. With yet more convincing, they enter the back garden and then return to the left side of the house which is filled with even more pleasurable rooms. They proceed to the dining room with the floating table and revolving door which hides the stewards; have a meal, after much encouragement by Trémicour. After a while, Méliste is so bedazzled that she is forced to sit, for fear of fainting. Trémicour seizes the opportunity to throw himself at her feet begging. She resists his entreaties, but he takes her none the less.

...

The relationship between the simulation of love as sexual pleasure and its effect on architectural writing has been made apparent. The arena of the Two as

defined by Badiou, is of duration (à la endurance and creative evolution), in Ovid, it becomes an artifice directed at a greater logic, and in the Gnostic tradition it becomes completely transformed; thus the *Hypnerotomachia*.

However, for the purposes of this thesis, the *Hypnerotomachia* and Bastide's *Petite Maison* do not qualify as erotic, as they are not about love; at best, they are 'pornographic', and can find their logical conclusion in de Sade. Sade's *Philosophy in the Boudoir*, takes place in the same sort of petite maison as Bastide's, and just as with Bastide, it is given over to libertinage. An example is when Eugénie asks why there are so many mirrors in the boudoir (recall Trémicour's boudoir) to which Madame de Saint-Ange responds that it is to heighten the pleasure of the viewer, as all parts of the body can be viewed from the ottoman.¹³³ While Bastide's form of libertinage is a bit obscure and forces one to find some form of amusement in it, de Sade creates a spectacle which not without its own humour can be horrifying.

¹³³ "Eugénie: Oh, God! Oh, the delicious niche! But why all these mirrors?

Madame de Saint-Ange: By reflecting the positions in a thousand different images, the mirrors infinitely multiply the same delights in the eyes of the people enjoying them on this ottoman. That way, no part of the body can be concealed: everything must be exposed. And there are as many groups surrounding the people entangled in love, as many imitators of their pleasures, as many delightful tableaux whose lechery is intoxicating, and which can soon serve to crown our efforts." Marquis de Sade, *Philosophy in the Boudoir*, Penguin Books, London, 2006, pp. 17-18

5: 8.2 Philosophy in the Boudoir

Philosophy in the Boudoir is about the sexual education of a young girl by an older woman. It gives a graphic description of libertinage, its methods and its horrors. What is most significant about it is that it is more of a treatise on ethics than it is pornography, a point which is attested to by Sade's various interludes where he expounds the theoretical basis of violence, on the nature of virtue, and on the concept of republicanism. Again, the philosophical program is given through a rigorous pedagogical form, which finds its substance in sexuality. The instructions to Eugénie vary from the human sexual anatomy, to the impossibility of the existence of God and the stupidity of morality, charity and chastity. De Sade's attack however, is mainly on Christian morality, and it is unclear that he was familiar with the Hermetic influences beyond his claim that Jesus spent fifteen years in Egypt.

With Philosophy in the Bedroom, the difference between love as philosophical procedure, and love as sexual pleasure is made vivid; even under the guise of the war machine there is a marked difference as to the outcomes of the amorous

enterprise. Like Ovid, de Sade endorses adultery, but he also endorses prostitution, incest and rape.¹³⁴

It is remarkable that in Sade, the body takes on a political inscription, and whether victim or victimiser, sexuality is transformed from the realm of pleasure, to the realm of power. It would seem that central to de Sade's madness, there is a proper aristocratic philosophy, a philosophy of sovereignty; de Sade is a philosopher of the war machine. Thus, in *philosophy in the Boudoir*, sexuality serves the purpose of political philosophy; in fact, de Sade is engaged in a political procedure. What appears to be a simulation, is in fact part of a rigorous construction, albeit in fidelity to a simulation. The same may be possible in Bastide's novella, if only the affirmation is of a male supremacy; because the legacy from which it derives attests to the male. This is not the case

¹³⁴ "I advise a girl to have a good friend, a woman, who, untrammelled and in society, can help a girl to secretly taste those worldly pleasures. At the very least, the girl should attempt to enthrall the spies who surround her. Let her beg them to prostitute her, promising to give them all the money they would derive from these sales. Either these spies themselves or the women they find - the so-called procuress - will soon fulfil the girl's wishes. She can then throw dust in the eyes of all the people around her: brothers, cousins, friends, parents. She ought to submit to all of them if that's necessary for concealing her behaviour. Indeed, if it's demanded of her, the girl should even sacrifice her leanings and her preferences. An amorous intrigue that displeases her, and to which she submits purely out of self interest, will soon lead her to a more agreeable situation - and she'll be launched in society. But she should never return to the prejudices of her childhood. Threats, exhortations, duties, virtues, religion, advice - the girl should trample them underfoot. And she must stubbornly reject and despise everything that tends only to clap her in irons again - in short, everything that doesn't contribute to keeping her in the lap of lewdness. [...]. The pleasures of esteem, Eugénie, are nothing but spiritual delights, which are suitable purely for certain minds, while the pleasures of *fucking* please everyone." Ibid. p. 34

in Sade, where sexual difference is dissolved in favour of power structure. Foucault covered this extensively in the second volume of *A History of Sexuality*, where he discusses the nature and social milieu of the practice of pederasty, a structure of love which Plato condemns in the Symposium¹³⁵.

There is an uncanny resemblance between Méliete and de Sade's victims, given that they are sworn to virtue and chastity, yet are taken in spite of (*because of*) their protestations by force. An example is in the final book of *Philosophy in the Boudoir*, where Eugénie's mother is brought into Madame de Saint-Ange's boudoir. Erstwhile, she had been trying to bring up her daughter to be virtuous etc. her disdain at the relationship between her daughter and Saint-Ange lures her to the boudoir where amidst her complaints, she is severely whipped, beaten, gangbanged and sodomised; and in a final onslaught she is penetrated in her anus and vagina by a syphilitic, who discharges his spunk in both, and then under instruction from Dolmancé, her 'holes' are sown up by her daughter with needle and thread. This it seems is the logical conclusion of the erotic under sexual pleasure, its pedagogical nature renders it sadistic, in both form and content. To be convinced further of this, a consideration will be made of

¹³⁵ See M Foucault, *A History of Sexuality* Vol. 2: *The Use of Pleasure*, Penguin Books, London, 1992; also Plato, *The Symposium*, op cit

another one of de Sade's novels; again under the same themes, love, sex, and architecture.¹³⁶

5: 8.3 Justine

*Justine, or The Misfortunes of Virtue*¹³⁷ is a tragic story of a girl (Justine) who suffers various misfortunes based on a blind obedience to Christian virtue, only to find respite at the end in the arms of her sister. And when she has finally been restored to some semblance of good health, is struck down by lightening; as if to say, even nature abhors virtue. This story however is one of those responsible for the perception of the erotic space as some sort of depraved place, when, as in *Philosophy in the Boudoir*, it is the space of power that is depraved. In a sort of hasty generalisation, one may say that the petite maison of Bastide, is no different from the dungeons and prisons of de Sade, as the architecture is representative of something inhuman. It is a bit of an injustice that in presenting the petite maison as an example of erotic architectural writing, the reality of libertinage is carefully masked. In fact, a generalisation may be made that

¹³⁶ While one may be tempted to dismiss de Sade's writings as the work of a madman, the themes upon which he dwelt in his writings have been covered in the two hundred and thirty-eight case histories of Krafft-Ebing. See R von Krafft-Ebing, *Psychopathia Sexualis*, Rebman Company, New York. Internet Archive, University of Toronto, 2007; Available as e-book at: <http://ia350609.us.archive.org/1/items/psychopathiasexu00krafuoft/psychopathiasexu00krafuoft.pdf>, last accessed at 11:42 on 08 March 2010

¹³⁷ P J Gillette (trans.) *The Complete Marquis de Sade*, Holloway House Publishing Co. Los Angeles CA, 2006

sexuality is often a veil for the more sinister structure of power, where sovereignty resorts to simulation¹³⁸. Unfortunately, de Sade's sovereignty is of the reactionary type, and as such is trapped inside the form it tries to resist. Love, however, resists classification, as it remains indifferent to situations¹³⁹.

Justine's misfortunes take her through many architectural forms, the squalid boarding she had in the beginning after the demise of her mother, the home of the usurer, the prison, the campers lodge in the woods where she hid with a band of robbers, the castle of Marquis de Bressac, etc. At Bressac's Justine is co-opted into a matricide plot, at her protestation, an argument is presented to her about the existential nature of things and the error of ascribing more importance to man than to any other life form, thus, murder or any other form of vice is perfectly justifiable, as they occur in nature without compromise. This is the general nature of de Sade's arguments. The underlying logic is one of reason, i.e. following a pseudo-Cartesian system, emotions, morals, etc. are signs of an enslaved humanity, and a free man will act as he wills.

Justine betrays the matricide plot and is discovered by Bressac; undeterred, he executes the plot himself, and arranges for Justine's punishment. She is whipped

¹³⁸ See Badiou, A. *Ethics: An Essay on the Understanding of Evil*, op cit

¹³⁹ Badiou names 'situation' as the generally prescribed order (social, political, cultural, legal etc.) of things

and left bleeding, but also sent into destitution, as Bressac vows to blame her for the crime, rendering her fugitive. In what follows, she is taken in by a surgeon, who also happens to run a school for adolescents. As she is severely injured, it takes her over a month to convalesce; subsequently, her curiosity leads her to the discovery of the caprices of her host - his reason for running the school is libertinage, based on the subservience of the pupils and servants to their master¹⁴⁰. At the offer of her host, she joins the household and makes friend with his daughter, but on discovering she has been locked away in a cellar, about to be killed in the process of a live human experiment, decides to free her and together flee from the house. They are not so lucky; she has a toe pulled out from each of her feet, a tooth removed, is branded with an iron, and abandoned at night, at the edge of a forest.

She continues on her journey, stopping at a nearby town for a few days to heal her wounds. She resumes her journey, and after a while finds her way during the night to a Benedictine monastery which unknown to her, is another prison

¹⁴⁰ While in Sade, this is seen as libertinage, or vice, it is the same in form as the pedagogical system of pederasty in antiquity, only it is not restricted to homosexual relationships. While Plato condemns this form of love in *the Symposium*, he does not equate it as such to any form of vice, but regards it within its own specific social structure, a point which Sade had alluded to in *Philosophy in the Boudoir*; the marked difference is that Sade constructs libertinage under a system of physical violence, creating a victim in the place of a pupil or lover. This may be attributed to the role of Christian morality and Reason in dealing with sexual pleasure, hence this device of Sade.

of libertinage. She is taken in, and after giving a full account of her story is taken into the inner sacristy, where she meets three other monks and three girls. She is sodomised, bitten and beaten all over her body (until bleeding) to a pulp; she is forced to defecate into one of the monks' mouth, and is raped by another. This would be the routine until she either escapes or is killed. The monastery consisted of a church proper, and a six storey building separated from the church by a moat, of which three storeys were subterranean and housed the monks' bedrooms and the rooms where the orgies took place, and three top storeys which housed the girls. The building was accessible by a secret subterranean passage. Justine spends a while there, and shortly after a black mass is performed, she escapes. By the following morning, while she is just beginning to enjoy the rising winter sun, she is abducted, thrown in a sack and taken to a white fortified chateau to work as a maid to the owner, Gernande's wife. No sooner does she get there, than is she acquainted with his passions. He bleeds her till she faints, as the sight of blood arouses him; and while in this state of arousal he has one of his male attendants fellate him, while he fellates another. The same scenario was repeated a few days later, but this time it was Gernade's wife who was bled, with the male attendants fellating Gernand, and physically assaulting his wife. She eventually escapes this prison, only to

encounter further misfortunes, including one where her assailant rapes and strangles her with a rope, and then hangs her in a game of coordination from a scaffold he has constructed in his cellar (if she fails to cut the rope at the precise moment when the support is taken from her feet, she dies). She is successful, and they repeat this game on several occasions. After a few months, he asks her to hang him in the same fashion, hoping to achieve ecstasy in this manner. He places himself in the noose and begins to masturbate. As he is about to ejaculate, he signals for the support to be released. Hanging from the scaffold, he reaches climax and passes out, but Justine cuts the rope just in time to revive him. The following day he vanishes, and under a new ownership Justine is carted away with all the other 'slaves'. She is eventually thrown in jail, and while awaiting trial makes another confession, recounting her troubles and is miraculously reacquainted with her sister, with whom circumstances had parted fifteen years earlier. While she recovers in her sister's home, a person now of means, a storm breaks out, and Justine is struck dead by lightning.

The Sadian fantasy introduces a concept of the body of infinite resistance (it is beaten, tortured, bruised, scorned, and violated in several different forms, yet proceeds as if unscathed), but also the complicity in the shared crime (the black mass, joint brigandage, etc.) and the concept of ecstasy, achieved only in

transgressing the law or other moral statutes, from which Bataille's eroticism derives. In these, the space of eroticism is transformed; the *petite maison* becomes as important as the school, the monastery, the torture chamber, the prison or the scaffold. The prescriptive methods central to architecture become nothing short of instruments for the execution of power, as is made obvious from the boudoir to the prison.

It may thus be concluded that magical systems (Hermeticism and memory), prescriptive geometry (the *Timaeus* and the *Hypnerotomachia*), and algorithms all serve the same purpose of simulating worlds, while creation or pure becoming on the other hand, as in every truth procedure, derives not from simulation, but from endurance and an internal revolutionary constitution.

If the *Hypnerotomachia* and Bastide's *petite maison* are accepted as examples of erotic architectural writing, then de Sade's novels must be equally accepted as pre-empting forms (the dungeon, the cellar and the prison) of erotic architecture and architectural writing. Practitioners of BDSM (Bondage and Domination/ Discipline and Sado-Masochism) already consider these as erotic spaces, and it features extensively in their literature and films. However, to present the erotic from love, the enquiry will necessarily return to mythology and the divine violence central to love. But, before this, the erotic as prescribed by Bataille who

was greatly influenced by the writings of de Sade will be discussed, followed by the writings of Masoch which deal explicitly with love, albeit of a different type of simulation - the written contract, and the Body without Organs and becoming-animal in BDSM and the Story of O.¹⁴¹

5: 8.4 Bataille and Eroticism: Story of the Eye

For Bataille, the erotic is, as it were, a death instinct, as it involves the total annihilation of being. Where one's sexual engagement with the 'object', results in the loss of one's self. He starts with the analogy of the discontinuous nature of reproduction in asexual organisms to explain the position: where an organism splits into two or more and in that process ceases to be, but transforms into other beings. For Bataille, this primary violence is eroticism. Eroticism, he goes on to say, has no relationship with reproduction, in fact, it is opposed to reproduction; as in the small organism, it is a terminal point leading to transformation(s). Bataille mentions three types of eroticism; physical, emotional and religious. While his general enterprise centres on the religious, his definition of emotional eroticism is in tandem with the one of antagonism within this thesis. For him, emotional eroticism is the realm of lovers, and involves the

¹⁴¹ Žižek's claim, that the true stuff of life and existence beyond all exteriority is the 'horrible', is thus not too far-fetched. See S Žižek, *The Indivisible Remainder: On Schelling and Related Matters*, Verso, London and New York, 2007, p. 24

infinite continuity of the lovers' persistent discontinuity. He states that it is an impossible relationship; further, in keeping with the Lacanian position, he states that essence of love is to substitute for persistent discontinuity of the Two, in a state of continuous violation. For Bataille, the desire to possess, central to love, leads to death, murder or suicide; love is suffering. However, death in Bataille is considered from the position of transgression, as in de Sade, it is the breaking down of established patterns.¹⁴²

To get closer to Bataille's notion of emotional eroticism, it is worth discussing his novel, *Story of the Eye*, where it is dealt with slightly obscurely. Bataille tells of an adventure with Simone, an intensely pretty sixteen year old, and an unnamed boy of the same age. It starts with Simone sitting her vagina into a bowl of milk, with her and her friend masturbating together. It is followed by their running over of a girl on a bicycle, while driving, and stopping to watch her die, followed by various scenes of masturbation, urination and rape, but also a drunken outdoor orgy with other kids, where one of her friend rapes one of the girls. There is broken glass, and bleeding, Simone, urinates on the table and asks one of the boys to urinate on her. In all of this, they have co-opted a certain Marcelle into their group, and with her form a sort of psychological ménage-a-

¹⁴² G Bataille, *Erotism: Death and Sensuality*, City Lights Books, San Francisco CA, 1986, p. 18

trois. Marcelle suffers a mental breakdown and ends up in a sanatorium, where they go and release her. Marcelle eventually hangs herself. Beside the corpse of Marcelle, after urinating on it, Simone who is still a virgin, has sex for the first time with her friend, and finds pleasure in the sex only because it is painful. To escape any possible criminal charge, they flee to Spain where Simone arranges to meet with a certain Sir Edmund, who is eager to accommodate them, but also requests that Simone demonstrate her recent exploit with the corpse. Edmund gets a wax mannequin and Simone urinates on it just as she had with Marcelle's corpse. On one occasion at Edmund's house, a prostitute is brought to the house and thrown into his pigsty, followed by some violence, thrashing around, and rape by the unnamed friend. Similarly, they have sex in the toilet behind the arena where they have gone to watch a bull fight amidst the stink of horse manure, urine, human faeces, the intense heat of the noonday sun and a swarm of flies. They return to their seats, and the raw testicles of the slain bull she requested are on her seat. After much agitation, she bites into one of the testicles and inserts the second into her vagina, at the same time, the bull charges at the matador gouging out his eye. There is loud screaming from the crowd at the spectacle, while simultaneously Simone reaches orgasm. For a grand finale, she goes into a confessional booth and while giving her confession, she starts to

masturbate, which she also confesses to the priest, she then physically assaults him, pulling out his penis. Edmund flings her away from the priest who is dumbstruck and takes him into the vestry.

His fly was open, his cock dangling, his face livid and drenched with sweat, he didn't resist, but breathed heavily: we put him in a large wooden armchair with architectural decorations.

"Señores," the wretch snivelled, "you must think I'm a hypocrite." "No," replied Sir Edmund with a categorical intonation.

Simone asked him: "What's your name?"

"Don Amido," he answered.

Simone slapped the sacerdotal pig, which gave him another hard-on. We stripped off all his clothes, Simone crouched down and pissed on them like a bitch. Then she wanked and sucked the pig while I urinated in his nostrils. Finally, to top off this cold exaltation, I fucked Simone in the arse while she violently sucked his cock.

[...].

The Englishman returned a few moments later carrying a ciborium of twisted gold, decorated with a quantity of angels as naked as cupids. The wretched Don Amido gaped at this receptacle of consecrated hosts on the floor, and his handsome moronic face, already contorted because Simone

was flagellating his cock with her teeth and tongue, was now fully gaping and panting.¹⁴³

With help from her friend, Simone eventually rapes and strangles the priest to death in a fit of ecstasy. After which, she asks Edmund to cut out one of the priest's eyes. With a pair of scissors, he obliges her, hands over the eye which they both begin to play with, then her friend has sex with her while Edmund inserts the eye into her arse. Afterwards, she takes the eye and inserts it into her vagina. They leave the scene disguised as ecclesiastics and make sail on a yacht.

The story is a transgressive collage about the adventures of two lovers. While they proceed together, there is often a complicity in their engagements, (a crime, an act of transgression, social taboo, etc.). In it, Bataille is preoccupied with acts that provoke censorship: nudity, scatology (pissing/ urinating), rape, blood, saliva and dirt (mud, the pigsty, etc.); also, he makes a fetish of the vagina, stockings and garters. Often, he juxtaposes nudity against technological objects (Simone's cunt on the bicycle seat when she cycles with her unnamed friend, naked in the middle of the night from the sanatorium where Marcelle has been kept), or strange couplings (urine and saltpetre, and lightning and an antique chamber-pot of unglazed earthenware, lying on the zinc roof of an abandoned

¹⁴³ G Bataille, *Story of The Eye*, Penguin Classics, London, 2001, p. 61

washhouse). Also, sex often includes an 'other' (initially, it is Simone's mother, then Marcelle, and finally Edmund); this other also takes the form of the boiled eggs, raw bull's testicles, eyes, or some other form of spectacle.

In Bataille's eroticism, the architectural spaces and objects, (bidet, toilet bowl, bathroom, wash house, sanatorium, pigsty, the bull arena and the church, confession booth and altar) serve to stage erotic encounters, and are in themselves (fetishised) given importance. The relationship to de Sade is unquestionable but, due to its contemporary nature it may be viewed more as madness than as fiction. However, in this exploration, it fits into the relationship of bodies with themselves, i.e. sexual pleasure, albeit through transgression. Nothing in the plot betrays the struggle of love that has been defined earlier.

Before a switch to Deleuze in addressing the erotic, another author often mentioned in combination with de Sade, Sacher-Masoch will be discussed. He wrote a series of short stories on love, but also a complete novel, *Venus in Furs*. It is to his name that the clinical term Masochism belongs; it was given by Krafft-Ebing for the sexual perversion where physical suffering and humiliation become prerequisite to sexual gratification. Deleuze also covered Masoch in his book *Masochism: Coldness and Cruelty*, which will be explored briefly with Masoch's Venus.

5: 8.5 Sacher-Masoch

In Masoch's life as well as in his fiction, love affairs are always set in motion by anonymous letters, by the use of pseudonyms or by advertisements in newspapers. They must be regulated by contracts that formalize and verbalize the behaviour of the partners. Everything must be stated, promised, announced and carefully described before being accomplished.¹⁴⁴

It is essential to Masoch that he should fashion the woman into a despot that he should persuade her to cooperate and get her to "sign."¹⁴⁵

In Masoch, love takes on a plastic turn. Things become as if frozen in time, as if they were paintings. Love is no longer an encounter, it is a staging. According to Deleuze, Masoch creates sensual objects, carnal artefacts. The body ceases to be natural and becomes human; it is presented as an aesthetic object. In *Venus in Furs*, Masoch asks that Wanda always be in fur when she wants to humiliate him, he asks to be addressed as a serf, and to be given a serf name (Masoch is in reality an aristocrat). Elsewhere, he asks to be dressed as bear, etc. All the time it is the victim who instructs the assailant (torturer); also, in Masoch the assailant is always a woman. For him, woman is a mystical form, a suprasensual (supercarnal) form that needs to be educated. It is not merely an impossibility of

¹⁴⁴ G Deleuze, *Masochism: Coldness and Cruelty*, Zone Books, New York, 2006, p. 18

¹⁴⁵ Ibid. p. 21

connection between the positions (man and woman) it is a forced staging, through the creation of a stereotype. In this way, Masochism is closest to architecture as an erotic form.

Waiting and suspense are essential characteristics of the masochist experience. Hence the ritual scenes of hanging, crucifixion and other forms of physical suspension in Masoch's novels.¹⁴⁶

To use a familiar architectural analogy, it is sort of reminiscent of Eisenman's Wexner Centre, and Guardiola House¹⁴⁷, where weighted structural elements (columns, massive beams) are left as if hanging¹⁴⁸. However, contrary to the current enquiry, the architectural object in Eisenman is privileged. It is the building and the various transformations that have gone into its production which are given pride of place; as if privileging the crucifix or other hanging device in de Sade. For Masoch, it is not the singular item, the fur, whips or stiletto, or the cross, but the entire assemblage accompanied by its own specific

¹⁴⁶ Ibid. pp. 70-71

¹⁴⁷ See C Davidson, (ed.) *Tracing Eisenman: Peter Eisenman, Complete Works*, Thames and Hudson, London, 2006

¹⁴⁸ The purpose of the analogy between the suspended columns in Eisenman and the invocation of suspension in the Masochist narrative is to illustrate the weakness in the (commonplace architectural) appropriation of terms. The suspended columns and weighted structural elements in Eisenman are the chance results of formal manipulations. Thus, while they may appear aesthetically as creating a tension to the viewer, it will be inappropriate for that affectivity to be reduced to the tension to which the narrative in Masoch aspires. Similarly, it is inappropriate for the narrative to be reduced to the effects of the props used in the staging of the Masochist set; because, the narrative in Masoch is about a suspension created in the theatricality of intensities (difference). See G Deleuze, *Difference and Repetition*, Continuum, London, 2004

contract that creates the erotic scene. Deleuze, citing Reik, gives four basic characteristics masochism¹⁴⁹; the fifth, which he claims Reik omits, is the specific form of the contract, the basic precondition for the love relationship, and what (it is suggested) makes Masoch a moralist.

1. The "special significance of fantasy," that is the form of the fantasy (the fantasy experienced for its own sake, or the scene which is dreamed, dramatised, ritualised and which is an indispensable element of masochism).
2. The "suspense factor" (the waiting, the delay, expressing the way in which anxiety affects sexual tension and inhibits its discharge).
3. The "demonstrative" or, more accurately the persuasive feature (the particular way in which the masochist exhibits his suffering, embarrassment and humiliation).
4. The "provocative fear" (the masochist aggressively demands punishment since it resolves anxiety and allows him to enjoy the forbidden pleasure).¹⁵⁰

Laws bind actions; they immobilize and moralize them. Pure institutions without laws would by definition be models of free, anarchic action, in

¹⁴⁹ G Deleuze, *Masochism: Coldness and Cruelty*, op cit, pp. 74-75

¹⁵⁰ Ibid. cf. Reik, *Masochism*, pp 44-91

perpetual motion, in permanent revolution, in a constant state of immorality.¹⁵¹

5: 8.5.1 Masochism and the Body without Organs

In *A Thousand Plateaus*, Deleuze and Guattari locate love on the plane of the Body without Organs (BwO); the BwO being the plane of continuous antagonism, the plane on which the body attempts to rid itself of its senses.

The BwO: it is already underway the moment the body has had enough of organs and wants to slough them off, or loose them.¹⁵²

It is sort of contradictory, as they discuss masochism as an intensification of the body in a sort of annulment of the senses, whereas in *Masochism: Coldness and Cruelty*, Deleuze states apropos of Krafft-Ebing, that the masochist experiences pleasure as everyone else, however seeks gratification in (intensification) humiliation and pain. In a sense, if this gratification is similar to the compensation for the impossibility of sexual connection, then it occurs in spite of, rather than after an annulment of the senses, in fact, the suprasensual nature of masochism requires that the senses are active, otherwise, there can be no experience of pain or humiliation.

¹⁵¹ Ibid. p. 78

¹⁵² G Deleuze and F Guattari, *Capitalism and Schizophrenia: A Thousand Plateaus*, op cit, p. 166

The *masochist body*: it is poorly understood in terms of pain; it is fundamentally a question of the BwO. It has its sadist or whore sew it up; the eyes, anus, urethra, breasts and nose are sewn shut. It has itself strung up to stop the organs from working; flayed as if the organs clung to the skin; sodomized, smothered, to make sure everything is sealed tight.¹⁵³

The nature of the contradiction becomes clear as they discuss the relationship between fantasy (phantasy) and program in psychoanalysis and psychiatric care. The problem is that while masochism may be accepted as a capitalist phenomenon, regarding the body as a site for various commodifications, in the writing of Masoch, it is experienced consciously; i.e., without recourse to palliatives. In the BwO, the masochist is further up the evolutionary milieu, it is in the realm of narcotics, anaesthetics and schizophrenia.

Mistress, 1) You may tie me down on the table, ropes drawn tight, for ten to fifteen minutes, time enough to prepare the instruments; 2) One hundred lashes at least, a pause of several minutes; 3) You begin sewing, you sew up the hole in the glans; you sew the skin around the glans to the glans itself, preventing the top from tearing; you sew the scrotum to the skin of the thighs. You sew the breasts, securely attaching a button with four holes to each nipple. You may connect them with an elastic band with button holes - *Now you go on to the second Phase*: 4) You can choose either to turn me over on the table so I am tied lying on my stomach, but with my

¹⁵³ Ibid. pp. 166-167

legs together, or to bind me to the post with my wrists together, and my legs also, my whole body tightly bound; 5) You whip my back buttocks thighs, a hundred lashes at least; 6) You sew my buttocks together, all the way up and down the crack of my ass. Tightly with a double thread, each stitch knotted. [...].¹⁵⁴

The situation in Masoch is quite different; although it is as instructional and contractual, it leaves out specific anatomical details, further, it is indicative of will towards submission, as opposed to a subjecting the body to a plane of (pain intensities) inscriptions. While Deleuze might suggest that this is contingent upon the nature of censorship at the time of Masoch's writing, it has to be insisted that the quality of art is tied into its production constraints, as in every other truth procedure, if there is no struggle, there is no creation. One can only conclude that the masochism of Deleuze and Guattari is based on the generic clinical term coined by Krafft-Ebing, bearing only a semblance with the literary scenario in Sacher-Masoch.

5: 8.6 The Story of O

The situation is further complicated in Pauline Reage's *Story of O*, where love takes on the double form of submission, humiliation and pain. In the *Story of O*, the subject submits herself to 'destitution'. However, in Reage, as in Masoch, the

¹⁵⁴ Ibid. p. 167

subject expresses distress at its¹⁵⁵ suffering, which is not the same as the rendering of Deleuze and Guattari. Reage's story is closest to the arena of the Two. However, whereas the subject (O), submits to the various ordeals: the distension of her anus and vagina¹⁵⁶, the perforation of her labia and the attachment of ornamental weights such that it extends, her branding as a slave, and her various whippings, etc., the story is set as a spectacle, as O is often put on display either in a participatory form, where other members of the fraternity 'use' her, or as an object to demonstrate a subject in total submission to the horror and awe of the observer, as in the final scene, where she is brought in on her hands and knees, collared, shackled, adorned with her extended labial weights and costumed as an exotic bird.¹⁵⁷ O enters into a becoming-bird which is reminiscent of the masochist in Deleuze and Guattari, who enters into a becoming-horse, with the marked difference that this subject, while sexualised is not set up as a spectacle. Further, while the masochist asks to become-horse, O submits into a becoming-bird. Reage's novel, unlike Sade or Masoch, is properly pornographic, and while it is centred on love (O is trained, she struggles, but

¹⁵⁵ Simultaneously his/her, referring to the subject as a non-specific entity, because in Reage, the subject is female, in Masoch, it is male.

¹⁵⁶ There is a tactical difference between de Sade and Reage. In Reage, there is a specific distension of the labia and anus, while in de Sade there is the preponderance of sodomy. Apropos of Baudrillard, these are tactics which attempt to render the scene devoid of any humanity. For Deleuze, these are the specifically human dimensions.

¹⁵⁷ P Reage, *Story of O*, Corgi Books, London, 1972

resigns herself dutifully), it is based on performance and spectatorship. The pornographic form of BDSM is specifically this.

In Reage as in Masoch, the erotic is constructed within a domestic space. Unlike the varying scenes Sade or in Bataille, eroticism is confined to the Chateau or the apartment, similar to the *petite maison*. The main protagonist in *Venus in Furs* describes his lodgings. "The house I was staying in was located in a type of park or forest or wilderness - whatever one wishes to call it - and was very isolated."¹⁵⁸ Similarly, when they move to a different location, the house they stay in is over a similar description. In *The Story of O*, similarly, apart from the homes of her lovers, the chateaus where she is trained, used and displayed are tucked away in the country, one at Samois, the other at Roissy.

5: 9.0 Conclusion

The scene of the Two, as a premise for the exploration of the erotic allows for a move beyond the simulation of fetish and representation, and to see the erotic in its complete manifestation. Thus, erotic architecture within this axiom of love, is an assemblage which includes a psychotic narrative in its subjective manifestations: rape, violence, death, scatology, anthropophagy, etc., all within

¹⁵⁸ L von Sacher-Masoch, *L. Venus in Furs*, Penguin Red Classic, 2000, p. 12

the composition of the 'architectural'.¹⁵⁹ While Sadism as an art form is reactionary and Gonzo-like¹⁶⁰, and Masochism is staged sensuality (apropos of reality TV), the erotic as an artifice of love is like 'true crime', simple, plain and cruel.

From de Sade and Masoch, one gets a general insight into the nature of the erotic, through the various simulations of sex (in Sade), and of love (in Masoch), however, it has not been possible to determine a position on the amorous based on them. Therefore, looking to the origin of the terms *sadism* and *masochism*, a determination of what the erotic might be from a position of love becomes possible. In this regard, the thesis claims that rape is one of the erotic manifestations of love, just as is murder and anthropophagy (albeit clinical perversions), for they all exist as the excessive dimensions of love, because they provide the antagonisms for the erotic narrative.

¹⁵⁹ Architecture as a geometric assemblage is not restricted to Cartesian space, or projective geometry, the geometry of continuous inflection advocated by Leibniz and continued in the thesis of Bergson allows a consideration of architecture in cinematic and narrative terms. Thus, while cave, temple or chateau may be invoked as familiar symbolism, the space of the narrative is also architectural, as the stories are all constructed within geometric coordinates. Peg Rawes covers this in her essay on the Plenum in Leibniz. See P Rawes, *Plenums: Rethinking Matter, Geometry and Subjectivity*, in *Material Matters: Architecture and Material Practice*, K L Thomas (ed.), Routledge, New York, 2007, pp. 56-66

¹⁶⁰ Gonzo film or documentary is a genre of film where the cameraman directs the cast, and this direction (usually auditory) is included in the final cut of the film.

5: 9.1 *Psychopathia Sexualis*

Of the two hundred and thirty-eight case histories listed by Krafft-Ebing, two of his forensic cases seem closest to the above claim. One is of a twenty year old man and a four year old girl, and the other, of a twenty-four year old man and a twelve year old girl. Both cases are pathological, and involve rape, murder and anthropophagy; however, in both cases the assailants demonstrate an unyielding desire to possess the objects of desire.

The cases fall under Krafft-Ebing's 'Perversion of Sexual Instincts', as a particular type of sadism. The term sadism is a generic term, derived from the practices within the stories of de Sade, and defined generally as "Association of Active Cruelty and Violence with Lust"¹⁶¹. However, the specific type of sadism that serves us is 'Lust Murder: Lust Potentiated as Cruelty, Murderous Lust extending to Anthropophagy'.¹⁶²

Going by Krafft-Ebing's analysis of sadism, it would appear that it is a condition common to lovers, as one is permanently trying to harm, suppress, or eliminate the other, or even oneself. However, sadism is also seen as a will to power over the other, and as part of human psycho-sexual evolution. What becomes

¹⁶¹ R Krafft-Ebing, *R. Psychopathia Sexualis*, op cit, p. 80

¹⁶² Ibid. p. 88

apparent in his thesis is that what he terms lust in sadism, (except in the cases of arousal simulated by homicidal excesses) may be construed as love, devoid of moralist reasoning. In a certain sense, this is consistent with this thesis, because, in naming the erotic as an artifice of love the primary parameter is love in its subjective manifestation, as in Medea's love for Jason, the betrayal of her homeland, their marriage, and their children. The excess of that love is in its psychotic manifestation, jealousy, rage, murder, etc., it is this excess that is defined as erotic. It is a blind violence, an outpouring of emotion beyond reason.

Below are two cases from the *Psycopathia Sexualis*

A four-year-old girl was missing from her parents' home, 15th April, 1880. On 16th April, Menesclou, one of the occupants of the house, was arrested. The forearm of the child was found in his pocket, and the head and entrails, in a half-charred condition, were taken from the stove. Other parts of the body were found in the watercloset. The genitals could not be found. M., when asked their whereabouts became embarrassed. The circumstances, as well as an obscene poem found on his person, left no doubt that he had violated the child and then murdered her. M expressed no remorse, asserting that his deed was an unhappy accident.¹⁶³

Leger, wine-dresser, aged twenty-four. [..]. wandering about eight days in the forest he there caught a girl twelve years old, violated her, mutilated

¹⁶³ Ibid. p. 89

her genitals, tore out her heart, ate of it, drank the blood, and buried the remains. Arrested, at first he lied, but finally confessed his crime with cynical cold-bloodedness.¹⁶⁴

As the enquiry is not concerned with sexual perversion (a clinical study), what is important is the involvement of the two subjects in the narrative. The proximity of their ages might contribute to the drama, but it doesn't render the situation any more than if the subjects were of similar age; that is however the subject of a different enquiry.

The erotic resides in its unyielding desire as an artifice of the amorous. In Masoch as in Deleuze, love is an aesthetic condition, and not a philosophical process. In this way, it resorts to various forms of simulation: the use of costumes, masks, whips, fetish, etc.; pretence and make-believe become important parts of the aesthetic arsenal, which are lacking in the animal. Thus, Deleuze's becoming-animal in Masochism and BDSM are manifestations of properly aesthetic love, in the same way as wearing costumes, applying make-up and getting tattoos and/or tribal markings, plastic surgery and botox are properly aesthetic phenomena. Nevertheless, while this is accurate, it cannot be

¹⁶⁴ Ibid. p. 94

accepted here, because, in a truth procedure, the interest is in the logical outcome of a certain procedure and not in appearances.

5: 9.2 Illustration: The House of the Chinese Mantis

Thus, based on love as the disjunctive synthesis of the Two, the logical conclusion for a contemporary presentation of the scene of the Two, i.e., the erotic as artistic presentation of love, is in the presentation of continuous antagonisms and simulated union (sexual encounter/ sexual pleasure); where the conjugal union is impossible except as initiatory or contract, and the annihilation of one anticipates the destitution of the other, as is seen in the cases of rape, murder and anthropophagy, where union marks simultaneous erasure.

Finally, the erotic is dominated by the domestic. With the exception of Bataille, all the other authors locate love, sexual pleasure and the mingling of bodies within domestic space.

...

The accompanying design work uses both cinematic (animation software and montage¹⁶⁵) and abstract narrative technique (collage and illustration) to present architecture as emergent form. It locates a generated form within an abstracted

¹⁶⁵ On montage, see G Deleuze, *Cinema 1: The Movement-Image*, op cit.

universe, wherein it presents the antagonistic polarities of the Two. The illustration, as narration contra the precise architectural form is thus the architecture.¹⁶⁶

¹⁶⁶ See Appendix 1 for more information on the strategy and presentation of the House of the Chinese Mantis

Chapter 6

Conclusion: *Creating Worlds*

6:1.0 Introduction

This chapter concludes the research by returning to the computational, and to the cinematic. But, it does so by recourse to a staging with the objectile: process driven, inflection and curvature based, and derived through computing (animation, mathematics and/or generative design). It argues that short of condemning the objectile, it should be entered into a relationship with narration, a strategy which Hernan Diaz-Alonso of Xefirotarch already embraces.¹

It argues following both Deleuze and Badiou that the cinematic image consists of a narrative 'set', and can be illustrated through literature or any other art form.² Also, it summarises the main points explored within the two strands of the thesis. First, with

¹ See H Diaz-Alonso, Chlorophilia, The Los Angeles Jungle, in *Digital Cities, Architectural Design*, Vol. 79, No. 4, July/August 2009, pp. 34-37; see also video collaboration Xefirotarch and Imaginary Forces, <http://www.imaginaryforces.com/archive/alphabetical/368>, last accessed on 15 March 2010, at 17:12

² In *What is Philosophy*, Deleuze and Guattari already attest to the techniques of architecture (drawing) as the precursor to cinematic technique of framing, in the way it juxtaposes different representations of the building (sections, etc.) in order to present the general idea of the architecture. For Badiou however, the issue is not so much the technique of presentation, but the strategy manifest in the presentation, i.e., the extent to which the presentation resolves antagonisms (or infinities); thus his thesis on art as a finite method of presenting the infinite, a system of presentation, such that new intensities are manifest. See G Deleuze and F Guattari, *What is Philosophy*, Verso, London and New York, 1994, p. 186

regard to the general commentary within the thesis, it demonstrates how an investigation on seduction has been modified and transformed to one on eroticism; arguing that seduction is not an event, but an intangible manifestation analogous to 'enchantment': a manifestation of the amorous scene. Second, with regard to the series of publicly presented papers, it defines virtuality as pure process, locating the human subject as sovereign potentiality within such a process, and defining avant-garde architecture as strategy of infinite production, analogous to axiomatic or geometric thinking in philosophy and mathematics, but distinct from mere object production (buildings, furniture, products, etc.). Further, that philosophical or scientific deliberation should not be reduced to common place appropriation by the profession of building.

It argues that the architectural avant-garde should resist the temptation of reducing systems of propositional logic to systems of building; a statement which Manuel DeLanda has also made with respect to the use of the Genetic Algorithm and the thesis of Deleuze in the practices of both architecture and urban design and planning³.

³ See M DeLanda, *Deleuze and the Use of the Genetic Algorithm in Architecture*, Designing for a Digital World, N Leach (ed.), Wiley-Academy, West Sussex UK, 2002, pp. 117-120; also, N Leach, *The Limits of Urban Simulation: An Interview with Manuel DeLanda*, in *Digital Cities*, op cit. pp. 50-55

If Badiou's position is accepted: that philosophy following Plato is the creation of another 'world', then clearly the direct appropriation of philosophy within a theory of architecture purposed on building, construction and planning is ill-fated. As such, avant-garde architecture should embrace computation, narrative and the cinematic as methods of artistic production, with the potentiality of enhancing critical reasoning, leaving the practice of building to 'built-environment professionals', including individual craftsman (engineer, artisan, etc.) or the bureaucratic apparatus of the State.

6: 2.0 Event: Declaration and Choice

This enquiry started as a hypothetical investigation into the use of cybernetics, computation, and the philosophy of Deleuze on production, specifically with respect to the *objectile*. Also, it was concerned with how computation could enhance the production (creation and generation) of enchanted or seductive architectural form.

These hypothetical interests led the investigation towards an understanding of the origins of modern computation in the Manichean triad of 'Operations Research, Game Theory and Cybernetics', and of Information Theory (war sciences). It argued that while differential calculus was fundamental to the war sciences, with regards calculating projectiles, the probabilistic model was also

fundamental to the predictive devices in ballistics research. Thus, it was insufficient to ground 'an ontology' based on one aspect of a particular effort. Nevertheless, the understanding of the war sciences motivated the enquiry towards a tactics or art of war, which was employed as a methodology. With reference to the War Machine in Deleuze and Guattari, the *arms race* in Dawkins, and ballistics research, the art of war proved a robust methodological device.

Further, it was demonstrated that through the philosophical model of Badiou, the art of war, is analogous to any protracted struggle towards a revolutionary breakthrough, a model which was given support by Peter Hallward and his references to the scientific procedures of Kuhn, Lakatos and Feyerabend. However, while Hallward demonstrated some scepticism about the anarchistic methodology of Feyerabend, that criticism was not sustained in this research, because while he claims that Feyerabend modifies his method as he proceeds, and thus cannot claim fidelity to any particular position, the position sustained with reference to the War Machine is that in order to achieve its objectives, it must modify its techniques as it proceeds. Thus, the term anarchist is allegorical for an approach that cannot be reduced to a specific protocol. It is thus an event, because it is a method which belongs to itself, in order to break with established traditions. The most notable example is with Charles Wilson and the

development of Particle Physics, from his dissatisfaction with the artefact productions of the Cloud Chamber. The War Machine was therefore taken from Deleuze and Guattari, and used to express the methodology adopted in the enquiry.

6:2.1 Movement

With regards the use of Deleuzian theory on production, i.e., numerical production and the *objectile*, the thesis posits that the *objectile* is not architecture. It claims that architecture is a cosmological system, embodying an evental encounter and the site and/or situation of the encounter, and cannot as such be reduced to a material object, or commodity. Thus, while the architectural avant-garde justify the production of nonstandard objects through numerical production, the reduction of architecture to product manufacture (commodity) is unacceptable. Therefore, with reference to Leibniz and the Gnostic traditions of the Renaissance, the concept of creation and cosmology consistent within the writings of Hermes Trismegistus and *The Monadology* of Leibniz, and which is occulted in the theses of Deleuze (*The Fold*, and *Immanence*), is resurrected in this enquiry. However, while Deleuze attempted a departure from *Essentialism* in Plato, he succumbed to it in Gnosticism. Thus while he rejects the Essences, he accepts the monads as vectors of continuous inflection. His acceptance of the

mathematical reduction of differential calculus is the justification of a move from Ideal geometries to curvature; thus one form of idealism is replaced by another. Similarly, in his books on cinema, he reduces the informational and probabilistic model of Bergson to give his own thesis on time and movement. Deleuze's enterprise is thus not at all revolutionary, but crafty⁴. His thesis on the movement image begins with a sort of disavowal of Bergson, but this is only a tactical procedure, because the thesis itself is not about cinema.⁵ The cinematic, is thus the probabilistic model of perception, which posits that any set perception is based on a particular instant, but is not true for the totality of the perception, as this is only presented in duration.

The scientific justification for the Deleuzian (or Leibnizian) model is the discovery of *Bose-Einstein Condensate* or superconductivity. Nevertheless, what science proves is that our perceptions are predicated upon the analytical models we employ, whether consciously or intuitively (analogous to the probabilistic model); thus, even with the discovery of the behaviour of elementary particles at close to absolute zero, all that can be ascertained is an observational justification

⁴ The colloquialism is deliberate. The more appropriate word would be 'devious', but that can be argued as consistent with Deleuze "taking a philosopher from the back". See S Žižek, *Organs Without Bodies: On Deleuze and Consequences*, Routledge, New York and London, 2004, p. 46 cf. Deleuze, *Negotiations*, p. 6

⁵ See A Badiou, *Deleuze: The Clamor of Being*, *Theory Out of Bounds*, Vol. 16, University of Minnesota Press, Minneapolis and London, 2000, pp. 14-16

of a theoretical proposition. It cannot lay any claim beyond this. Thus Badiou's claim, that the revolutionary procedure is based on blind faith, on the proclamation of a set proposition based on nothing. His recourse to Cantorian sets is thus that since there is nothing to be known about the multiple, it can only be assumed through recourse to representational models. Badiou develops this model from the *Dialogue of Parmenides*, but resolves it in the contemporary through *Set Theory and the Axiom of Choice* in the mathematics of Zermelo-Fraenkel.

For Badiou, set theory is thus the most appropriate for his ontology, because it is predicated upon the void, i.e., the pure multiple, incapable of representation, thus can only be presented as the empty set \emptyset . Its presentation as an articulate unity however, is based on a count of the multiple; i.e., $1 = \{\emptyset\}$. This principle is what guides the entire thesis of Badiou and what constitutes the *event*. Thus *event* is the instant of proclamation, and its trace is the statement; i.e., it is a declaration based upon blind faith in an encounter, as with the declaration of the resurrection of Christ by Paul on the road to Damascus, the declaration of love from the amorous encounter, the hypothetical proclamation of the scientist, and the manifesto of a political activist seeking an emancipatory break. The trace of the event is the statement that founds the procedure following the *event*,

as with the statement 'I love you' which establishes the scene of the amorous encounter.

Thus, the event is predicated upon choice. The scientific, artistic, amorous and political are thus specifically procedures which are based on *nothing* but 'proclamation'.

6: 3.0 Seduction: The Fallacy of Simulation

With regards to the other objective of the enquiry: which is the possibility of creating enchanted or seductive architectural form through computation and Deleuze. The main consideration is the question of 'form'. From the review of literature on Deleuze and computation in general, there was no correlation between the probabilistic form of mathematics and the physical form of objects. Nevertheless, while differential calculus is able to reduce movement to curvature, and can enhance artefact production, it cannot justify commodity production, which is the intention of the *objectile* or nonstandard production. Therefore, the enchantment or seduction of the object or commodity only arises after 'value' has been ascribed to it; this is usually exchange value (money) or some other form of profit based mechanism, and is propagated through various forms of social mediation. Thus, from a historical materialist perspective, form

in the sense of commodity cannot be the objective of philosophy or of computation.

Parametrics and algorithmic architecture which are thus reductions of complex dynamical systems to short-hand procedural protocols are thus better served as revolutionary from a position of art production, but not as architectural avant-garde, as they bring no new knowledge to architecture as a field of enquiry. Nevertheless, Building Information Modelling (BIM), a development after cybernetics, which builds upon the science of building and construction, contributes to the science of building, which this enquiry argues is an enterprise, distinct from architecture.

It is therefore only simulations, or hasty generalisations made specifically to suit the continuation of certain institutional practices or modes of production and domination that give justification to commodity production; i.e., architecture with building and construction, as opposed to distinct disciplines. Thus the dominant ideology of nonstandard production and the seduction (à la Baudrillard⁶) of the *objectile* within the avant-garde cannot be accepted.

⁶ Recall that seduction is an event in Baudrillard; see Section 4: 2.2, also J Baudrillard, 'Revenge of the Crystal: An interview with Guy Bellavance', in *Revenge of the Crystal: Selected Writings on the Modern Object and its Destiny, 1968-1983*, P Foss and J Pefanis (eds. and trans.), Pluto Press, Australia, 1990

6: 4.0 Endurance: The Amorous Scene

With reference to the denouncement of the reduction of curvature analysis to commodity production, and the rejection of multiplicities to monads, the thesis claims that given our inability to comprehend multiplicity, or specifically 'being', *becoming*, which is the result of the resolution of antagonism is all that is; thus the Bergsonian resolution of endurance and the process of concrete subjectivity following a fidelity to an event in Badiou. Enchantment or seduction thus ceases to be objectified and becomes an intangible and strictly subjective manifestation. But the enchanted form is presented only through the amorous scene, or the arena of lovers.

What is most endearing about this is that it confirms the event of the War Machine. Thus in the Platonic presentation of love, following *The Symposium*, love is specifically the name given to the unknown encounter that consists within an object cause of desire and the site/situation of the said encounter. In Ovid, Love is equated to war.

6: 4.1 Subjectivity

The amorous encounter, like all the other events is a premise for a potential becoming, but also the scene of a new universe, i.e., the specific constellation of

lovers. But, the productive force of the constellation is only possible when the lovers proceed in the declaration of the event. This process yields the subject; i.e., the individual or multiple which is transformed by the course of fidelity. In the thesis of Deleuze, there is no such claim to fidelity, the rigid doggedness of process following a declaration. The closest he comes to this is with reference to Kleist and the sovereignty of Michael Kohlhaas. Again, it is claimed that while there is a certain radicalism in Kohlhaas, his position remains privileged, and predicated upon revenge and self interest. Thus, Deleuze is incapable of inscribing concrete subjectivity within his oeuvre; a position which is given justification through the researcher's engagement with his philosophy.⁷

Returning to the amorous as a scene of subjectivity, its primary presentation is in the form of love letters, narrative prose, etc. thus Ovid is one of the earliest chroniclers of love stories, or erotic literature. In his writing however, love is both an analogue to war and a form of enchantment, nevertheless, his writing is able to present the erotic as an arena of antagonisms. Thus, the term erotic is applied to the novelistic presentation of love; i.e., the erotic is accepted as the artifice of love.

⁷ See accompanying volume: *The Virtual*

Thus, departing from seduction, the evaluation of erotic writing between the classical and the modern, demonstrate that the amorous scene transformed from the set of lovers in the classical, to the scene of reproduction and a failing of the flesh in Gnosticism, to its occultation in the Renaissance as illumination, following Hermetic philosophy, and to its modern form in decadence, marriage and masochism.

The thesis is thus unable to accept the erotic as a subject of the passions, politics of the body and aesthetic practices, or illumination, and returns to the scene of antagonisms inherent in the classical period. Therefore in its presentation of the erotic it looks to the amorous encounter and to the excesses which manifest from it; including, rape, murder and anthropophagy, stating that while these formed part of mythic narrative on Eros, in the contemporary they are considered as pathological and given names since Krafft-Ebing.

6: 4.2 Enchantment: Illustration

In conclusion, the enchanted is given computational form through the art of illustration. Therefore, while an architectural object is designed, it only serves as part of a set, or frame within which the erotic is situated. Further, because

enchantment is intangible and the result of a probabilistic determination⁸ or cinematic vision, it is always contingent upon a specific situation. Thus what may be considered enchanting to the reader may not be considered as such in a different situation. Also, the researcher is not able to say if the illustration is enchanting, the work can only aspire at enchantment through recourse to its contingency within a situation or evental site. As with the thesis of Badiou, the illustration of the erotic as art is specific to the particular situation upon which it is incumbent, but is not determined by the logic of that situation; thus, while it is contingent, it does not belong to the situation, it belongs to itself. The cinematic is thus given artistic form through the art of illustration.

6: 5.0 Conclusion: The Cinematic as Mathematical Probability (Virtuality)

Based on the above, the cybernetic and the computational are cinematic, in the probabilistic meaning of the word, following Bergson. Similarly, the movement-image of Deleuze suffices as an expression of the cinematic, because it utilises

⁸ Enchantment is an indeterminable thing which like information is probabilistic; nevertheless, I argue that the probabilistic model is the closest to any articulate form of perception, a position sustained from Bergson to Deleuze, and manifested in the mathematics (set theory) of Georg Cantor. However, unlike Bergson and Deleuze, who are quick to set up ontological positions based on differential calculus, Badiou's ontology has been established through Cantorian set theory; through which it is possible to determine the differential models of Bergson and Deleuze, as seen in Chapter 4 with the von Neumann set.

the strategy of the perceptual frame, again, given that perception is probabilistic. In Badiou, cinema is a rigorous art form, because it is able to subtract from the cinematic and create new perceptions, but it is the claim of this thesis that just as poetry and painting are able to provide new perceptions, so also is architecture, but only in its properly avant-garde form, because the antagonisms that constitute a duration are eliminated from the manifestation of buildings, in fact, such antagonisms are anathema to building. Thus, while there are a number of architectural strategies that can claim to be illustrative of antagonism, the practice of architecture as a State science does not give into the logic of endurance. The advocated form for the avant-garde is thus illustration.

Appendix 1

House of the Chinese Mantis

*If only because it is philosophically admissible to transpose onto the sexes what Jean Genet said of races. He asked what a Negro was, adding: 'and what colour is he (or she)?' when asked what a man or woman is, it would be a matter of legitimate philosophical prudence to ask: 'And first of all, what sex is he or she?'*¹



Concept Sketch for the House of the Chinese Mantis

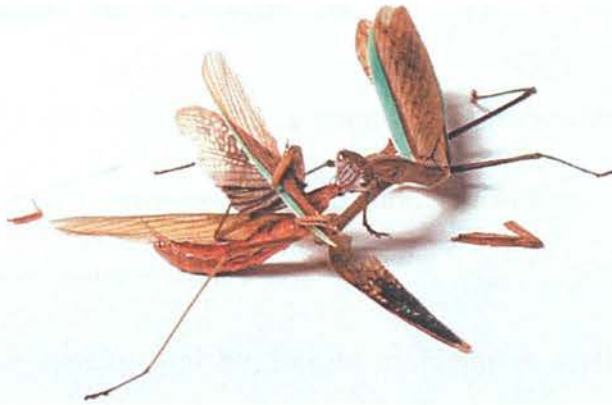
¹ A Badiou, *Conditions*, Continuum, London and New York, 2008, p. 179

1.0 Introduction

A male mantis approaches a female, flapping his wings and swaying his abdomen. Leaping on her back, he begins to mate. And quite often, she tears off his head.

The female Mantis devours the head of the still-mating male and then moves on to the rest of his body.²

Some sexual cannibals, including female Chinese mantises, actually eat a lot of males³



The mantidae originate from a group of now extinct insects known as the Paleodictyoptera, they are regarded as one of the most primitive group of insects to have existed, and can be traced back to the carboniferous age⁴. The

² C Zimmer, This Can't be love, The New York Times, September 5 2006, accessed online at <http://www.nytimes.com/2006/09/05/science/05cann.html> last accessed at 9:19am on 18th October 2009

³ Ibid.

⁴ See R Caillois, The Praying Mantis: From Biology to Psychoanalysis, in C Fink, The Edge of Surrealism: A Roger Caillois Reader, Duke University Press, Durham and London, 2003, p. 70

origin of the name mantis is one of considerable debate, but may owe to its status as a sacred insect, possibly as a result of its age and spectral character⁵. One of the earliest representations of the mantis is on the Proserpinian coin, where it is shown next to an ear of sacred corn, significant in the Eleusinian mysteries (dedicated to the cult of Demeter and Persephone)⁶, one of the greatest mysteries to be celebrated in antiquity. In other accounts, the mantis also appears to have a certain mythological significance.

2.0 Mythological Significance and Magic

Roger Caillois in his essay on the praying mantis⁷ identifies its mythological significance through various historical accounts. According to him, the mantis is often linked with sorcery, with one type of mantis in particular, *empusa* remarked as the spectre sent by Hecate in Homeric myth. This one-footed specter was apparently able to take on many forms, and Hecate was known as the goddess of sorcerers. Incidentally, in Guillermo del Toro's *Pan's Labyrinth*, it is the mantis that guides Ophelia to the magical world of the labyrinth, and the same mantis which transforms into the nymph that becomes her guardian

⁵ The mantis also goes by the name 'specter', meaning diabolical apparition, vampire, etc. Ibid. p. 71

⁶ See http://en.wikipedia.org/wiki/Eleusinian_Mysteries last accessed on 19th October 2009, at 01:46am

⁷ R Caillois, *The Praying Mantis: From Biology to Psychoanalysis*, in C Fink, *The Edge of Surrealism: A Roger Caillois Reader*, op cit, pp. 69-81

throughout her adventure. Moreover, the insect is considered sacred in many places and people are conscious not to cause it harm. And according to some, it is the supreme deity and creator of the world.

Caillois remarks in his essay, that in children's accounts of the mantis, it is known as a fortune-teller who knows everything, again bearing some semblance to del Toro's portrayal of the insect.



Still from Guillermo del Toro's Pan's Labyrinth

Caillois' essay becomes interesting, when the mantis takes on a vampiric turn, as in the story of Apollonius of Tyna; a young man about to be married is seduced by an amazingly beautiful woman, but Apollonius casts a spell on him, blinding him from this woman who he claims is an empusa (a vampire) that loves men and loves to feed on their flesh. Further on, Caillois remarks that the vampiric

turn may be related to the image of teeth, another mythological term attributed to the mantis, where it holds a tooth and lends it to whomever it wants⁸; but also of the psychoanalytic relationship between the body as phallus and the mouth as vagina; the construction of the vagina with teeth (*vagina dentata*), and the fear of castration. The mantis is thus tied in with the enchantress and the *vagina dentata*; it takes on the mythical form of the female who seduces the male, only to devour him.

3.0 Automaton

In reality, the act of the mantis is such that in mating with the male, it decapitates it before or during coitus, and completely devours it after insemination. One possible explanation for the decapitation is traced to crickets, which perform similar practices. The cricket apparently performs "induced reflex and spasmodic movements both better and for a longer time than before"⁹ decapitation, a notion Caillois later dismisses as incidental, as this automatic behaviour is common to many insect species. The mantis operating like an automaton is capable of performing several activities after decapitation, it can mate, build nests (*ootheca*), camouflage, etc. The Australian redback spider is

⁸ Ibid. p. 73

⁹ Ibid. p. 78

similar to the mantis in that it also kills and devours its male during coitus, with the male exhibiting similar automatic behaviour.

Male Australian redback spiders court females for up to eight hours by plucking the strands of their web. Once a male starts to mate, he promptly somersaults onto her fangs. He continues to mate as she feeds on him. In some cases, the male crawls a short distance away, courts the female again and then mates a second time. He flips onto her fangs, and by the end of the second mating, he is dead.¹⁰

Caillois concludes that it is the pleasure principle - the desire to satisfy biological or psychological needs - that guides the mantis to devour her lover.

He uses the analysis of the mantis for what he terms its lyrical force, i.e., the power of a given phenomenon to provoke thought through its objective significance. For him, the form and nature of the mantis bear an uncanny resemblance to man and is probably the reason for its symbolic status in mythology.

¹⁰ C Zimmer, *This Can't be love*, op cit



Stills from Guillermo del Toro's Pan's Labyrinth

4.0 Eroticism

The concern with the mantis in this enquiry, is in its resemblance to the position expounded earlier on the erotic, that the erotic manifests itself as an artifice and excess of love, in narratives of violence, rape and anthropophagy; and an illustration of the cannibalistic nature of the mantis mirrors that conclusion. Further, its spectral nature, lends it to the possibility of anthropomorphosis and sympathetic magic. In this regard, we may use Žižek's position of the representation of the altogether-other in contemporary cinema as inhuman, alien, cyborg, etc.,¹¹ but also surrealist narrative as in Caillois *Noon Complex* and

¹¹ This position is covered extensively in an essay presented at the Film-Philosophy conference in July 2009, see appendix, T Onabolu, *Four Twos: Becoming Immortal*, also S Žižek, *Robespierre, or, The 'Divine Violence' of Terror*, in *Maximilien Robespierre: Virtue and Terror*, London and New York, 2007, p. xv; also S Žižek, *In Defense of Lost Causes*, Verso, London and New York, 2008, p. 166

the transformations that occur when the sun is at its highest point. As such, the mantis through such magical transformation takes on the sovereignty of the cannibal.¹²

4.1 Salvador Dali

One of Caillois' recommended references to love and cannibalism is Dali. In his essay *Millet's L'Angelus*, he gives a reading of love and cannibalism which is built from what he termed the paranoiac phenomenon, i.e., the phenomenon in which, that which is illustrated, literally embodies both the associative forces and the psychic interpretations of the illustration. What is remarkable about Dali's analysis, is that he relates the 'ploughed earth' with the 'amorous couple', the 'wheel-barrow' and the 'pitchfork' in the *Angelus* via his illustration for *Les Chants de Maldoror*, to the 'dissecting table' offering the 'umbrella' and 'sewing machine': as 'masculine' and 'feminine' bodies on the 'evental site' of the 'amorous encounter', analogous to the sexual encounter and cannibalistic act. The umbrella symbolically representing a male erection, and the sewing machine: the vagina dentata, with its deadly and cannibalistic stitching needle "whose action becomes identified with the superfine perforation made by the

¹² R Caillois, *The Noon Complex*, in C Fink, *The Edge of Surrealism: A Roger Caillois Reader*, op cit, pp. 125-129

praying mantis “emptying” its male”¹³; the pitchfork representing and erectile masculinity and the wheelbarrow as rear form of the female in a position of animal sexuality. Further, Dali notes the crepuscular scene of the Angelus, the pious pose of the female figure which he equates to the “symbolic eroticism of mystical ecstasy,”¹⁴ and the male fixed in sexual excitement to the ground; from which he derives the violence represented in the female (ecstatic piety), and its subsequent resemblance to kangaroos and boxers, but especially to the praying mantis. According to Dali, “The fate of the male mantis always seemed to me to illustrate my own case when confronted with love.”¹⁵ The male is devoured by the female after coitus.

Without recourse to Dali’s mysticism but, in keeping with his paranoiac analysis, the plowed earth and the dissecting table serve the same function as the architectural object or the *plane of consistency* in Deleuze and Guattari: the plane of consistency, being the line of flight or locus of new becoming(s).¹⁶

¹³ S Dali, Millet’s *L’Angélus*, in *The Collected Writings of Salvador Dali*, H Finkelstein (ed.), Cambridge University Press, Cambridge UK, 1998, p. 281

¹⁴ S Dali, *The Tragic Myth of Millet’s L’Angélus*, , in *The Collected Writings of Salvador Dali*, op cit, p. 290

¹⁵ Ibid. p 293

¹⁶ In Badiou, the situation of the evental site is analogous to the plane of consistency.

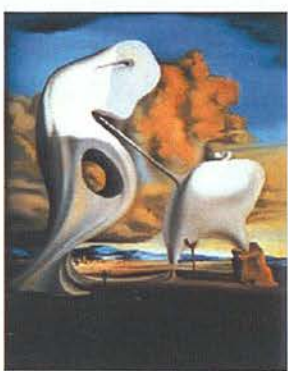
To say that the dissecting table is an architectural object is already an understatement, because not only is it inscribed architecturally, i.e., in a hospital or autopsy room, it is also symbolically charged: bodies are cut open on it.



Millet's *L'Angelus*



Dali's Illustration for *Les Chants de Maldoror*



Millet's *Architectonic Angelus* by Dalí

5.0 Proposition

The example of the mantis provides ample justification for the cannibalistic encounter of the Two on the architectural plane. The dissecting table, just as the house becomes an arena for a theatrical presentation of the amorous encounter.

In the illustration for the *House of the Chinese Mantis*, narrative form is being given to what has been established theoretically. The plane of consistency of the erotic is given architectural form, and similarly, the participants in the arena of the erotic are through mantidae. Further, the *evental* site is given subjective qualities: explosions, lightning, etc., using collage, montage filter and vector techniques in Adobe Photoshop, but also the rendering engine Flamingo in

Rhinoceros. However, the staging of the erotic takes a make-believe turn: the reeds and the ears of corn involving the mantis (from the Proserpinian coin) are used to create actual architectural form, with metaphorical presentations of pitchfork and wheelbarrow from *L'Angelus* forming the basic parameters for the staging, as does the dissecting table with umbrella and sewing machine in the work of Dali. The more subjective dimensions of the staging will be achieved with gold, glitter, and various spectral effects. The mantis after all belongs to the reeds.

6.0 Conclusion

In the future, it is the intention of the researcher to carry out this architecture within theatrical or cinematic performance (the erotic staging of the mantis in the reeds), with costume and special effects. For now the research will content itself with the Chinese mantis (the most cannibalistic of the mantidae), its ootheca (where it nests its eggs) and house in the illustration: *The House of the Chinese Mantis*.

This artistic procedure is derived from Badiou's thesis on art¹⁷ as a method of finitely presenting the infinite. His argument on art is based on its capacity to

¹⁷ One of the four truth procedures in philosophy beside love, science, and politics

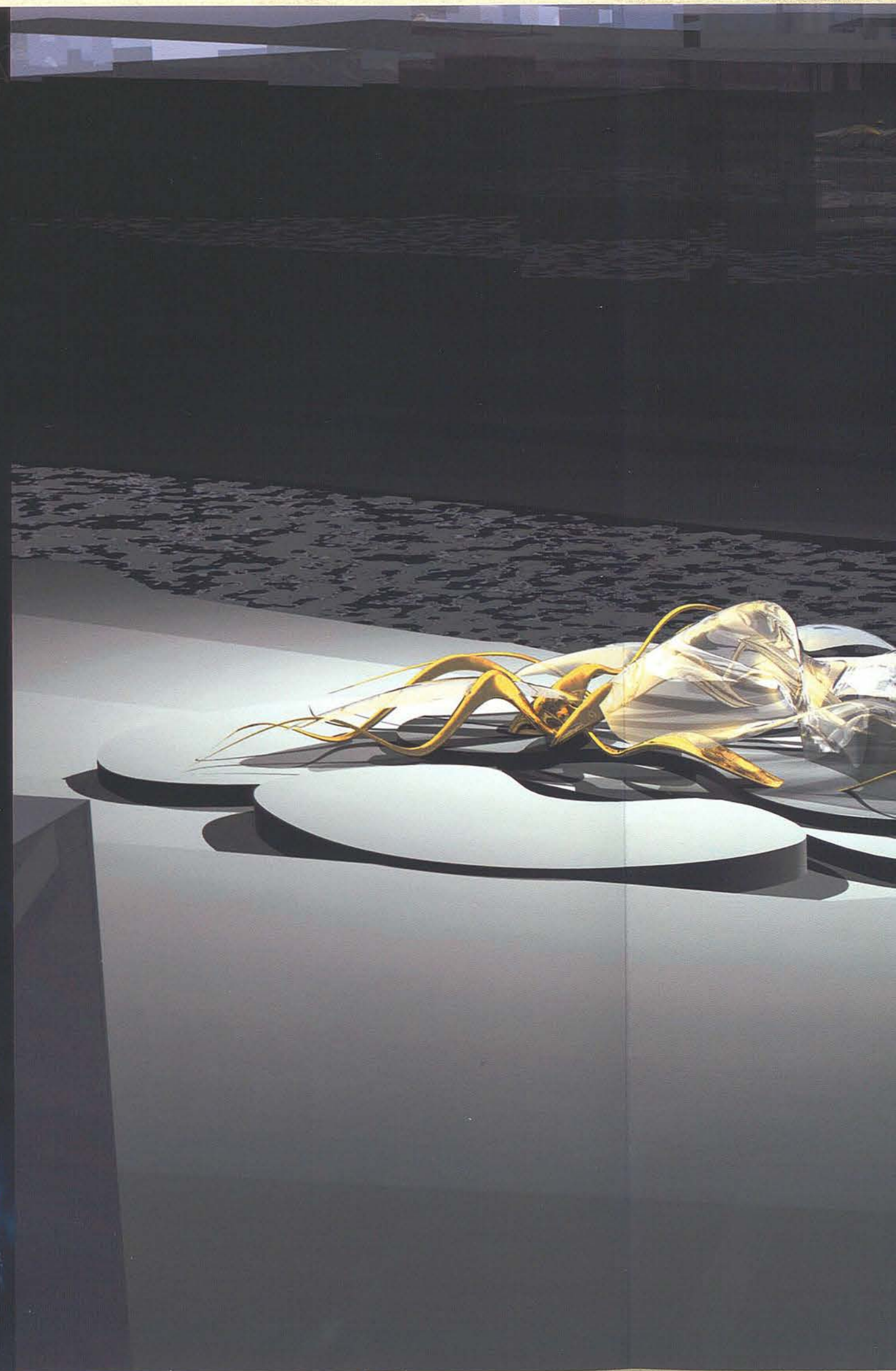
produce new forms for the presentation of ideas (infinite multiplicities). Badiou arrives at this position by inverting Plato's allegory of the cave. As such, while Plato argues that the shadows which are presented on the back of the cave are simulations or copies of ideas, Badiou argues, drawing parallels with cinema, that the shadows can be viewed as new images projected unto the cave wall based on the effect of light or fire on the people inside the cave, and as such are the same idea manifest differently. Further, he extends this argument, again through Plato's thesis against representational art forms, by stating that the production of art is in-itself the production of ideas, as these ideas spring forth from the artist's imagination, and are given form within the technical or technological milieu available to the artist.

Thus, in presenting the House of the Chinese Mantis, architecture becomes a new art form, by embracing ideas which do not originally 'belong' to it. Further, the project itself while using essentially mimetic objects (reproduced reeds, etc.), is an original production (creation), in the same way, according to Badiou, Picasso's painting of horses is as original as the cave paintings of the same equine subject: they share in common the same idea of horseness.

In presenting the erotic as original, through the House of the Chinese Mantis, all it bears in common with Dali and Caillois is the notion of cannibalistic violence

borne out of love; which it presents through architecture instead of painting or theory. The idea is thus presented in its pure form, albeit transformed in appearance; hence, emergence/ becoming(s) / new creating(s) proposed in the philosophies of both Deleuze and Badiou, are manifested in the antagonism of the meeting of the two sexed positions. In this particular illustration, Bergsonian duration is given a narrative and allegorical turn.

House of the Chinese Mantis

[illegible]



February 10 *Nefastus*

*Lucifer has lifted his fifth shimmering light
From ocean's waves. The time will be first spring.
Do not be deceived. Frosty days remain, remain;
Departing winter left ample signs.*

Ovid, Fasti, 149-152

February 24 *Regifugium Nefastus*

...quiritius and his fine flee, a consul takes charge
...a year. This was monarchy's last day.
...we deceived - or has spring's herald, the swallow,
...me, unafraid of returning winter?
...you'll complain often Procne, of too much haste;
...coldness will delight husband Tereus

...id, Fasti 2, 851-856

...dion married Zenoxippe, his mother's sister, and begot two
...ughters, Procne and Philomela, and twin sons, Eteocleus and
...s. But war having broken out with Labdacus on a question of
...ularies, he called in the help of Tereus, son of Ares, from Thrace,
...d having with his help brought the war to a successful close, he
...e Tereus his own daughter Procne in marriage. Tereus had by
...a son Itys, and having fallen in love with Philomela, he se-
...nd her also saying Procne was dead, for he concealed her in the
...rty. Afterwards he married Philomela and bedded with her and
...ut her tongue. But by wearing characters in a robe she re-
...ed thereby to Procne her own sorrows. And having sought out
...sister, Procne killed her son Itys, boiled him, served him up for
...per to the unwitting Tereus, and fled with her sister in haste.
...en Tereus was aware of what had happened, he snatched up an
...and pursued them. And being overtaken at Daulia in Phocis,
...y prayed the gods to be turned into birds, and Procne became a
...hingale and Philomela a swallow. Tereus was also changed into
...bird and he became a hoopoe.

...pollodorus, *The Library*, III, xiv. 8

Frame 0240

Over a hundred years later Apollodorus, Ovid retells the story of the rape of Philomela in the *Metamorphoses* VI, 424-674, with a different emphasis. In his version, the marriage of Procne and Tereus is marked from the beginning by the Furies, they are the attendants at the wedding and it is they who prepare the nuptial bed. After the birth of their son, Procne asks leave of her husband to visit her sister (Philomela) or to have her sister visit her, wishing to grant her desires, he sets sail to get Philomela, but upon seeing her, he falls desperately in love with her. He delivers Procne's wish to have her visit, and asks their father (Pandion) to grant Philomela leave to visit her sister. Pandion grants the wish and Tereus takes the opportunity to abduct her. They set sail, and he takes her to a deserted cave, where he rapes her. Subsequently, he rapes her repeatedly and returns home, where he tells Procne that her sister had died under tragic circumstances. Procne mourns her sister, but after a year, Philomela sends an encrypted message to her sister through one of the women watching over. Procne receives the message, sets out to free her sister and brings her back with her. When they return, Procne takes her son, in the same invoking the same sentiments as Medea, that the son resembles the father and kills him. She stabs him on his side with her sword and cuts off his head. She cuts up his body into bits and boils some parts and skewers the rest. She beckons Tereus to partake of the feast. While he is enjoying his meal, he beckons for their son Itys, at which time Procne reveals to him that their son is already within him, and throws his severed head on the table. In a rage, he pursues her and invokes the Furies, after which they are all turned into birds.

Frame 0200

Frame 0120

Frame 0100

Frame 0060

The story shares the theme of eroticism which the thesis tries to argue: that from the position of the amorous encounter, the erotic embraces the themes of rape, murder and anthropophagy, similar to the themes that interested the Surrealists, hence the fascination with Mantidae. The house of the Chinese Mantis is thus an attempt to embrace the logic of the erotic within narrative form and to locate the architectural object within the space of such narrative. This it argues is the proper space of becoming.

Frame 0040

Frame 0050

Frame 0060

Frame 0070

Frame 0080

Frame 0090

Frame 0100

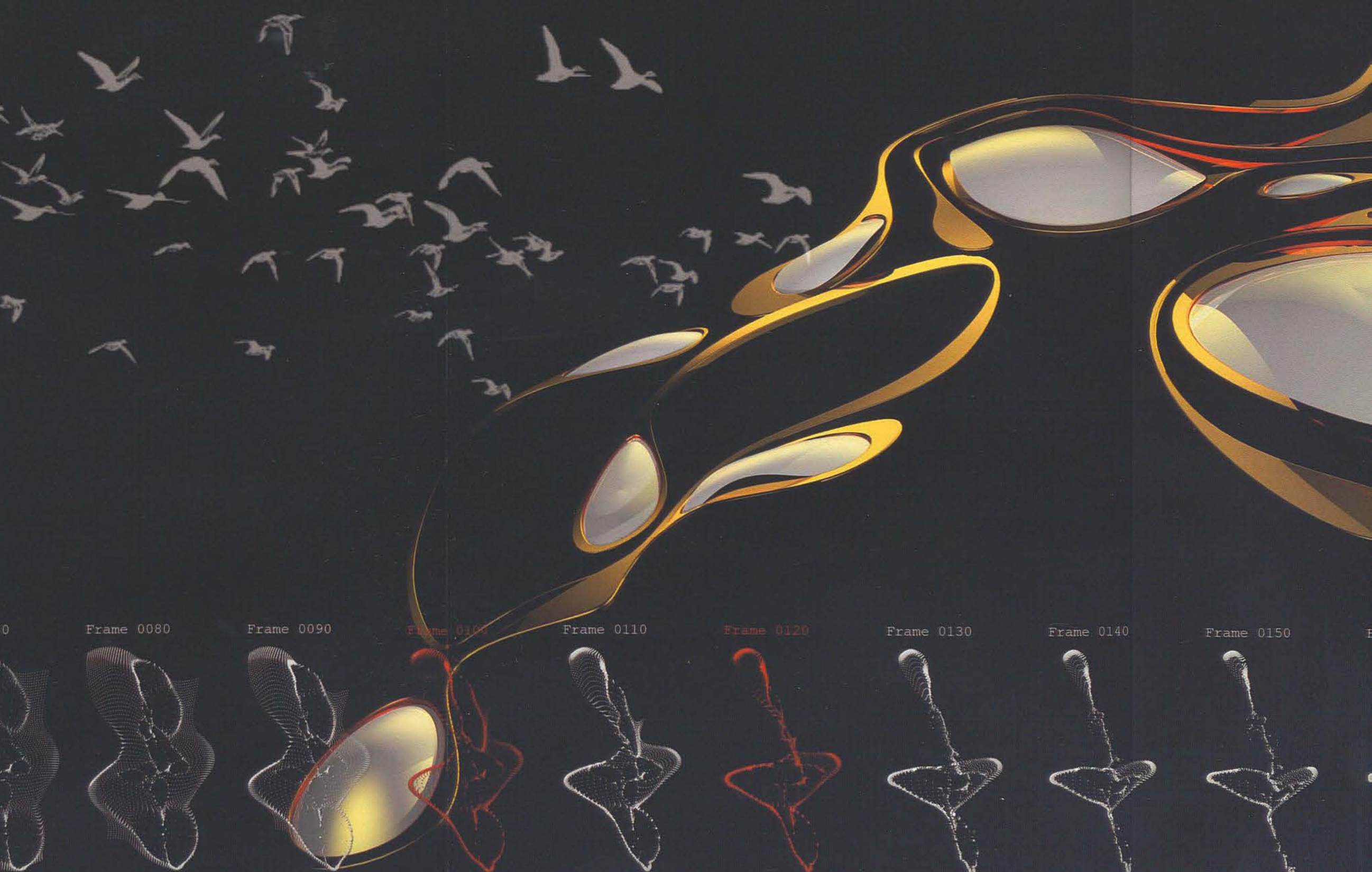
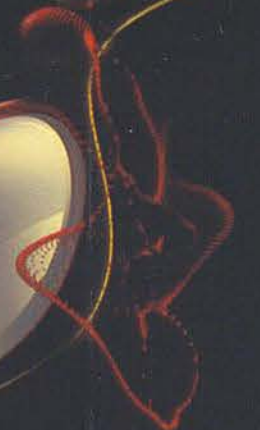
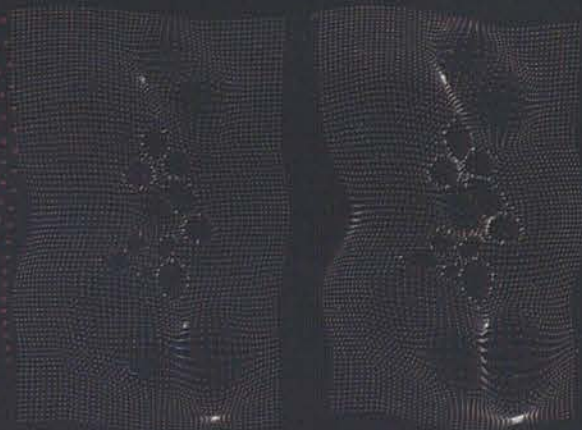
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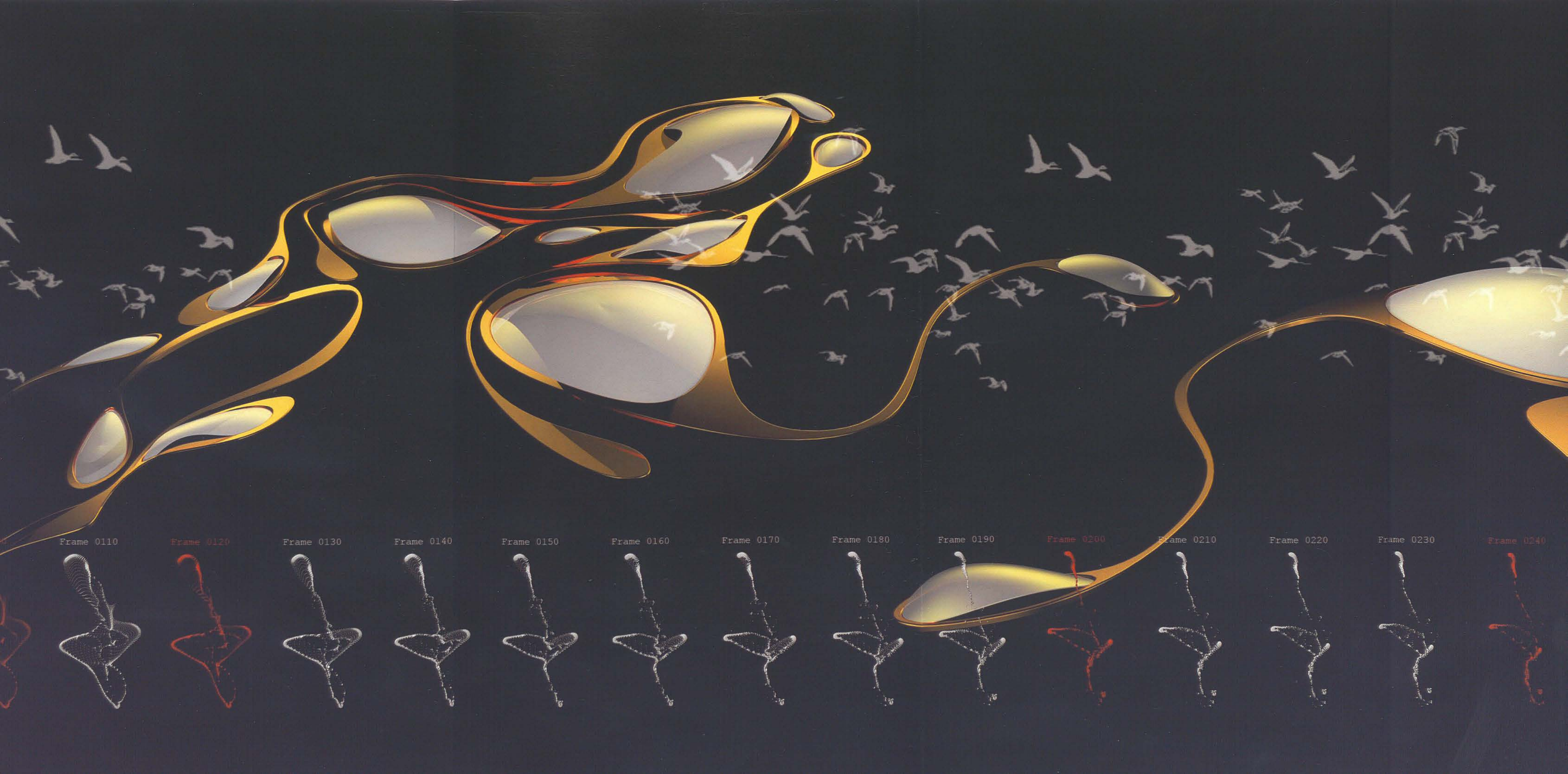
Frame 0120

Frame 0130

Frame 0140

Frame 0150





Frame 0110

Frame 0120

Frame 0130

Frame 0140

Frame 0150

Frame 0160

Frame 0170

Frame 0180

Frame 0190

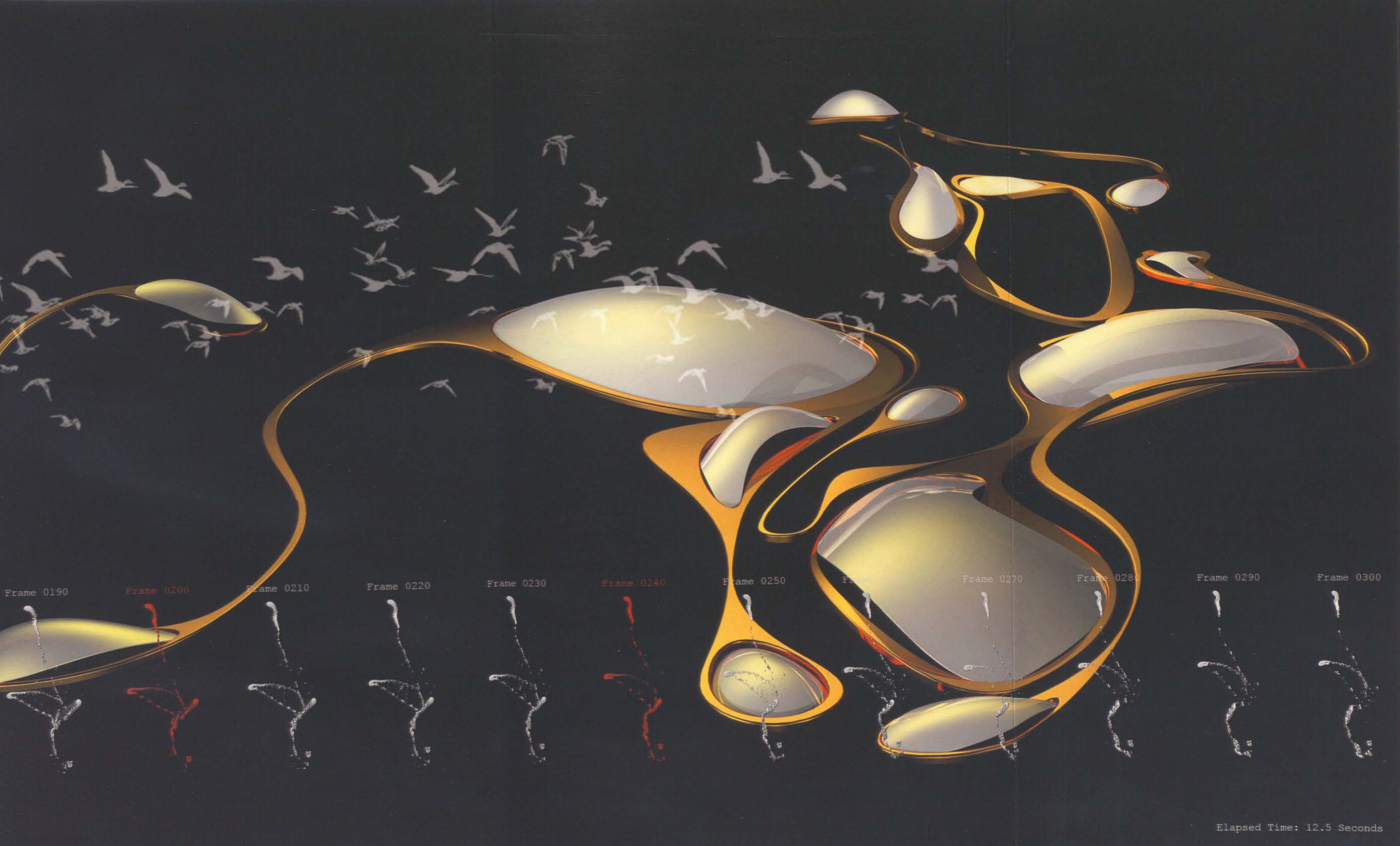
Frame 0200

Frame 0210

Frame 0220

Frame 0230

Frame 0240



Frame 0190

Frame 0200

Frame 0210

Frame 0220

Frame 0230

Frame 0240

Frame 0250

Frame 0260

Frame 0270

Frame 0280

Frame 0290

Frame 0300

Elapsed Time: 12.5 Seconds



20

FRAME



30

FRAME



40

FRAME



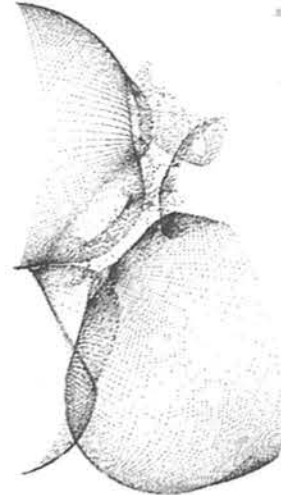
50

FRAME



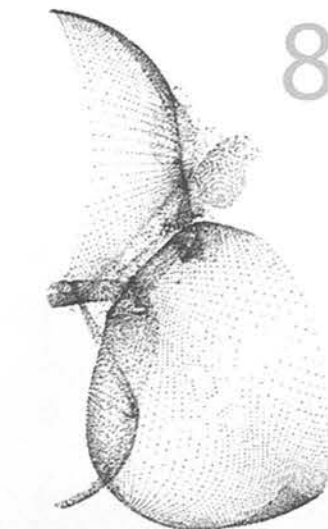
60

FRAME



70

FRAME



80

FRAME



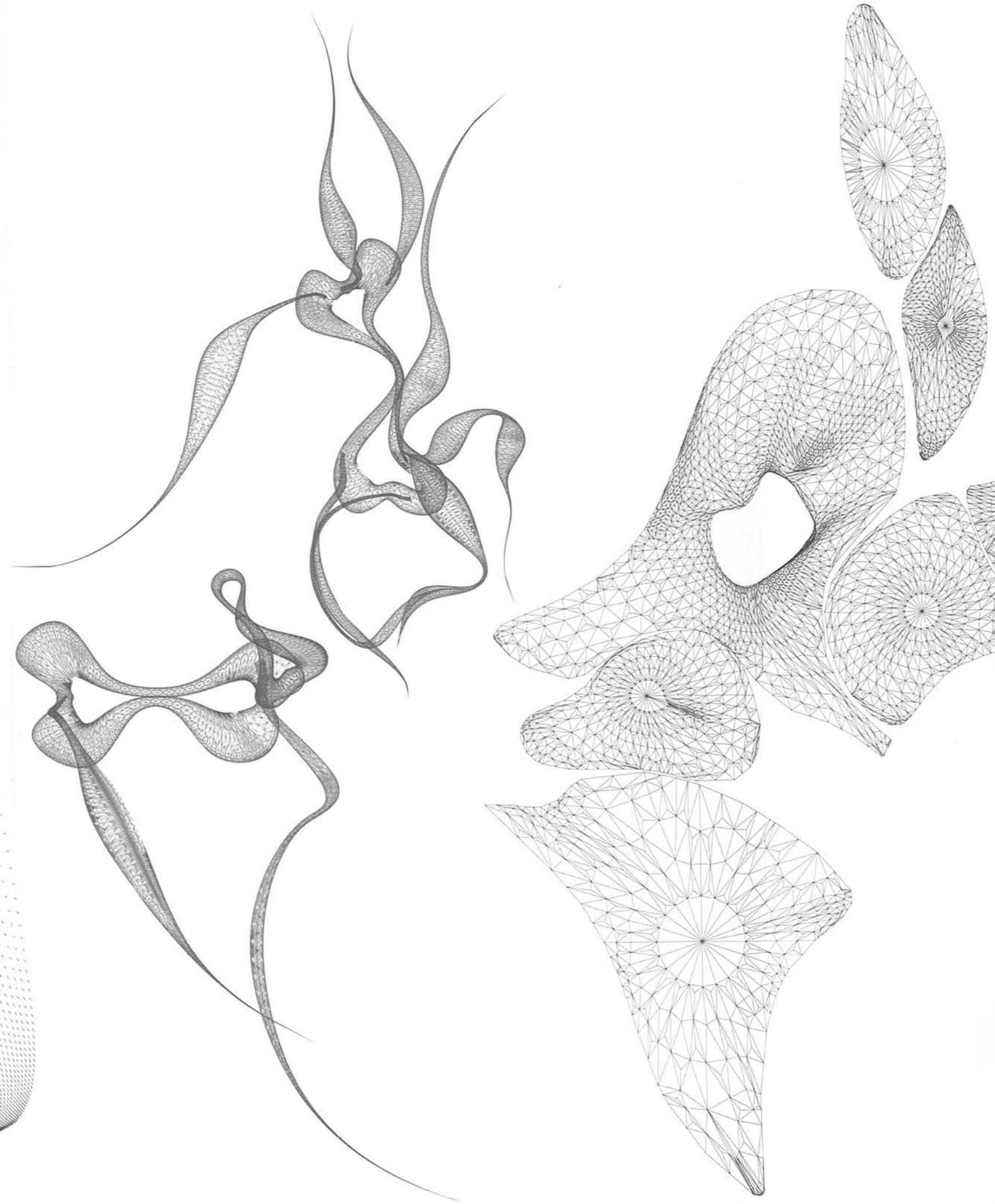
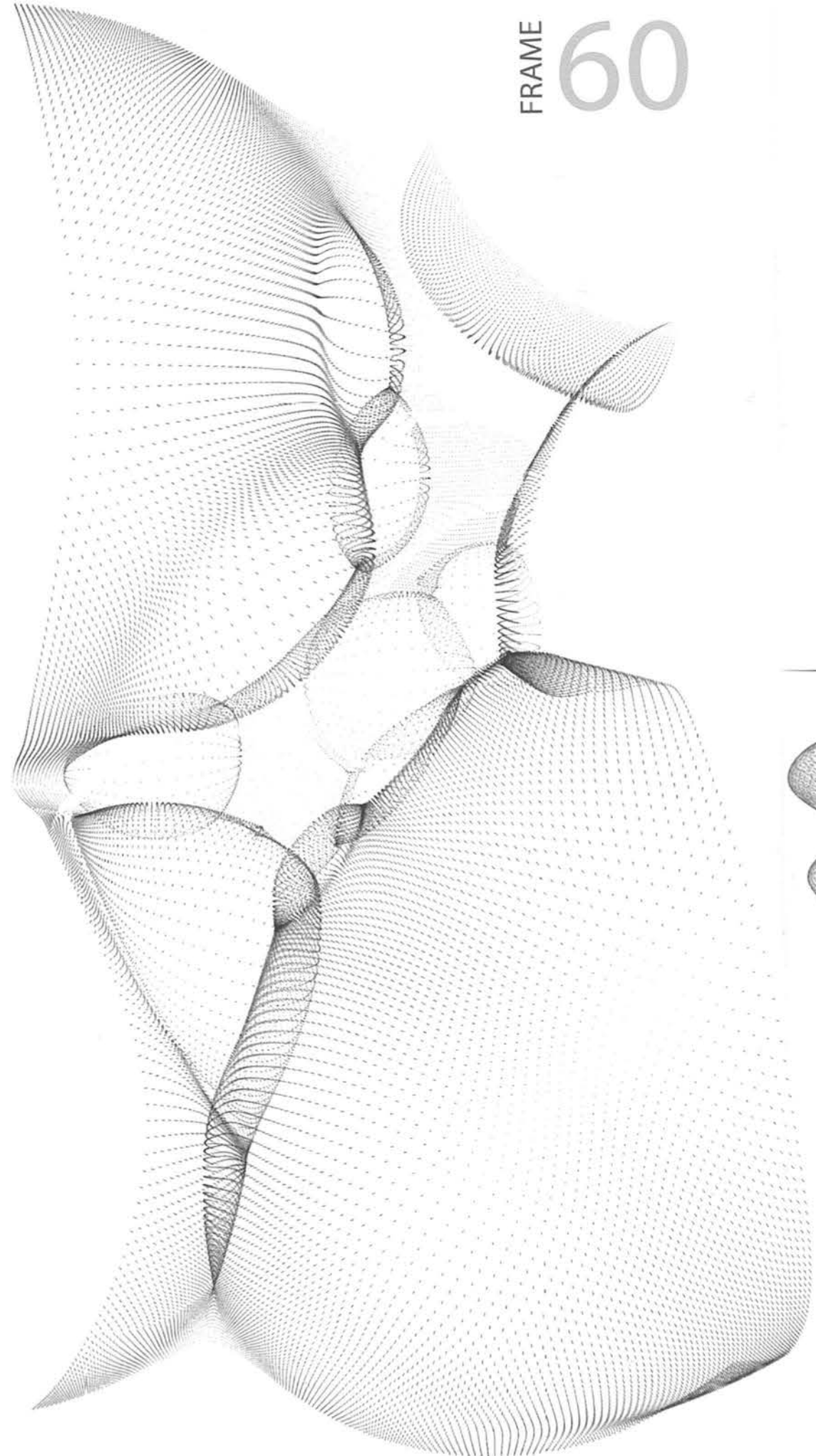
90

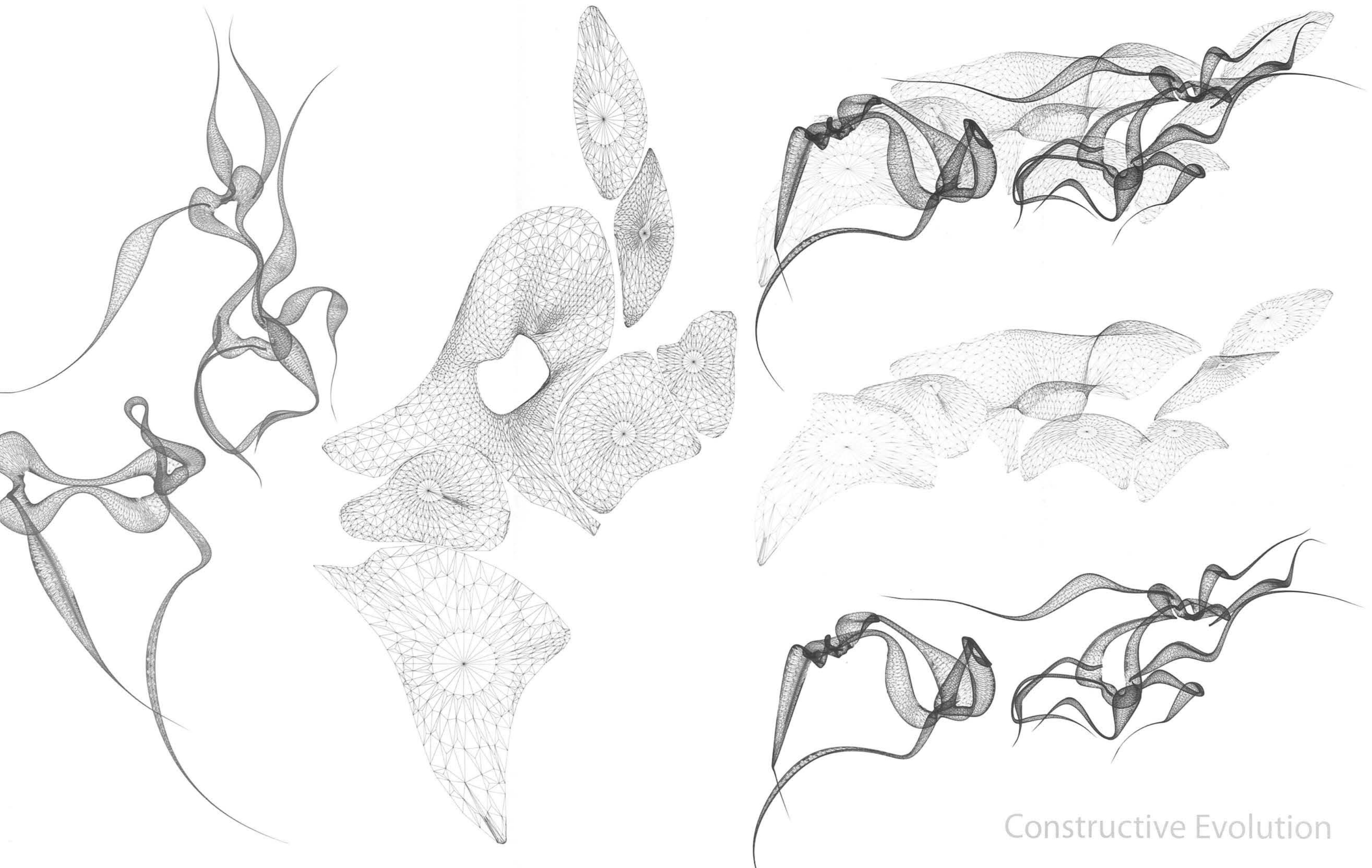
FRAME

```
createNode transform -n "particle1";
setAttr "t" -type "double3" 485.18590532177586 0 0;
setAttr "s" -type "double3" 1.25 1 1.6542954435648574;
createNode particle -n "particleShape1" -p "particle1";
addAttr -ci true -sn "lifespanPP" -ln "lifespanPP" -bt "life" -dt
"doubleArray";
addAttr -ci true -h true -sn "lifespanPP0" -ln "lifespanPP0" -bt "life"
-dt "doubleArray";
addAttr -ci true -sn "lifespan" -ln "lifespan" -bt "life" -at "double";
setAttr -k off "v";
setAttr "gl" -type "int32Array" 0;
setAttr -s 21 "ifc";
setAttr "pos0" -type "vectorArray" 43621 -2400 0 -2400 -2400 0
-2380 -2400 0 -2360 -2400
0 -2340 -2400 0 -2320 -2400 0 -2300 -2400 0 -2280 -2400 0 -2260
-2400 0 -2240 -2400
0 -2220 -2400 0 -2200 -2400 0 -2180 -2400 0 -2160 -2400 0 -2140
-2400 0 -2120 -2400
0 -2100 -2400 0 -2080 -2400 0 -2060 -2400 0 -2040 -2400 0 -2020
-2400 0 -2000 -2400
0 -1980 -2400 0 -1960 -2400 0 -1940 -2400 0 -1920 -2400 0 -1900
-2400 0 -1880 -2400
0 -1860 -2400 0 -1840 -2400 0 -1820 -2400 0 -1800 -2400 0 -1780
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0 -1740 -2400 0 -1720 -2400 0 -1700 -2400 0 -1680 -2400 0 -1660
-2400 0 -1640 -2400
0 -1620 -2400 0 -1600 -2400 0 -1580 -2400 0 -1560 -2400 0 -1540
-2400 0 -1520 -2400
0 -1500 -2400 0 -1480 -2400 0 -1460 -2400 0 -1440 -2400 0 -1420
-2400 0 -1400 -2400
0 -1380 -2400 0 -1360 -2400 0 -1340 -2400 0 -1320 -2400 0 -1300
-2400 0 -1280 -2400
0 -1260 -2400 0 -1240 -2400 0 -1220 -2400 0 -1200 -2400 0 -1180
-2400 0 -1160 -2400
0 -1140 -2400 0 -1120 -2400 0 -1100 -2400 0 -1080 -2400 0 -1060
-2400 0 -1040 -2400
```

```
setAttr -k on "lifespan" 1;
createNode radialField -n "radialField4";
setAttr "r" -type "double3" -1609.6116021648538
-1.4210854715202004e-014 67.301599360304976;
setAttr "att" 1.5;
setAttr "max" 600;
setAttr "umid" yes;
setAttr "fc[0]" 0 1 1;
setAttr "amag[0]" 0 1 1;
setAttr "crad[0]" 0 1 1;
createNode radialField -n "radialField5";
setAttr "r" -type "double3" 226.48038522130804
-3.1263880373444408e-013 1391.6924841327909;
setAttr "att" 1.5;
setAttr "max" 600;
setAttr "umid" yes;
setAttr "fc[0]" 0 1 1;
setAttr "amag[0]" 0 1 1;
setAttr "crad[0]" 0 1 1;
createNode newtonField -n "newtonField2";
setAttr "r" -type "double3" 400.57802956971631
2.5579538487363607e-013 -964.40250078516488;
setAttr "mag" 250;
setAttr "att" 0.25;
setAttr "max" 1200;
setAttr "umid" yes;
setAttr "fc[0]" 0 1 1;
setAttr "amag[0]" 0 1 1;
setAttr "crad[0]" 0 1 1;
setAttr "zmin" 0.2;
```

FRAME 60





Constructive Evolution

Appendix 2:

Examples with Algorithms

Test 1

```
for($z=0; $z<10; $z++){  
  for($y=0; $y<10; $y++){  
    for($x=0; $x<10; $x++){  
      polyCube -w 1 -d 1 -h 1;  
      $r= rand(-1,3);  
      move (($x+$r)*2) (($y+$r)*3) (($z+$r)*5);  
      scale ($r*0.2) 0.35 1.5;  
      rotate (($x+$r)*15) (($y+$r)*15) (($z+$r)*15);  
    }  
  }  
};
```

Test 2

```
for($z=0; $z<10; $z++){  
  for($y=0; $y<10; $y++){  
    for($x=0; $x<10; $x++){  
      polyCube -w 1 -d 1 -h 1;  
      $r= rand(-1,3);  
      move (($x+$r)*2) (($y+$r)*3) (($z+$r)*5);  
      scale 0.2 0.35 5;  
      rotate ($x*15) ($y*15) ($z*($r*15));
```

```
}  
}  
};
```

Test 3

```
for($z=0; $z<10; $z++){  
  for($y=0; $y<10; $y++){  
    for($x=0; $x<10; $x++){  
      polyCube -w 1 -d 1 -h 1;  
      $r= rand(-1,3);  
      if(($r+$x)%5==1) continue;  
      move (($x+$r)*2) (($y+$r)*3) (($z+$r)*5);  
      scale 0.2 0.35 5;  
      rotate ($x*15) ($y*15) ($z*($r*15));  
    }  
  }  
};
```

Test 4

```
for($z=0; $z<10; $z++){  
  for($y=0; $y<10; $y++){  
    for($x=0; $x<10; $x++){  
      polyCube -w 1 -d 1 -h 1;  
      $r= rand(-1,1.5);  
      move ($x*2) ($y*2) ($z*2);  
      scale 0.2 0.35 5;
```

```

rotate ($x*15) ($y*15) ($z*15);
}
}
};

```

Test 5

```

$r= rand(-1,5);
for($z=0; $z<(10+$r); $z++){
for($y=0; $y<5; $y++){
for($x=0; $x<25; $x++){
polyCube -w 1 -d 1 -h 1;
move ($x*2) ($y*2) ($z*2);
scale 0.2 0.35 5;
rotate ($x*15) ($y*15) ($z*15);
}
}
};

```

Test 6

```

$r= rand(-1,5);
$p= 3.142;
for($z=0; $z<(10+$r); $z++){
for($y=0; $y<5; $y++){
for($x=0; $x<25; $x++){
polyCube -w 1 -d 1 -h 1;
move ($x*2) (sinh(30*$p/180)) ($z*2);
}
}
}

```



```

scale 0.2 0.35 5;

rotate ($x*15) ($y*15) ($z*15);

}

}

};

```

Test 7

```

$r= rand(-1,5);

$p= 3.142;

for($z=0; $z<(10+$r); $z++){

for($y=0; $y<5; $y++){

for($x=0; $x<25; $x++){

polyCube -w 1 -d 1 -h 1;

move ($x*2) (sinh(30*$p/180)) ($z*2);

scale 0.2 0.35 5;

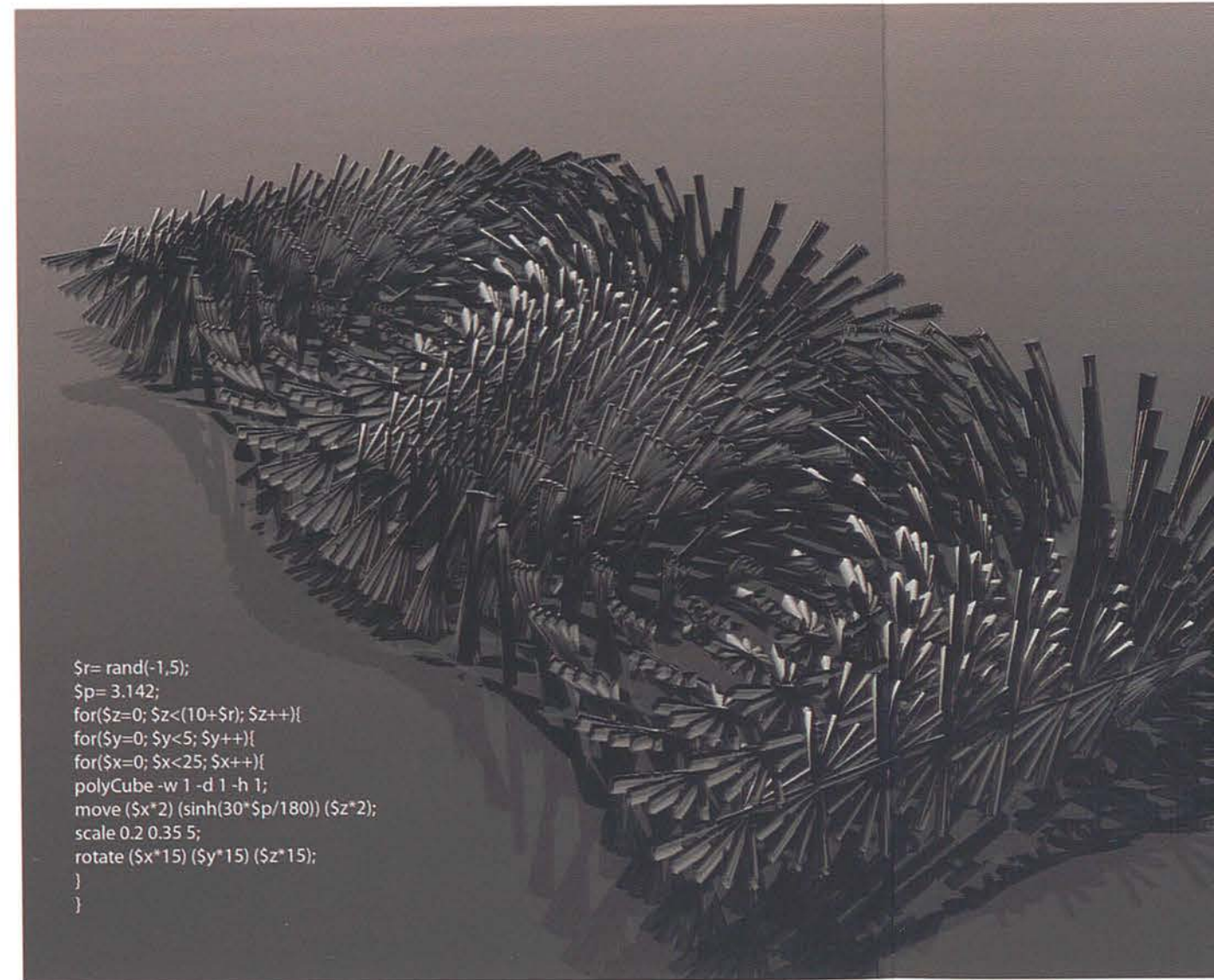
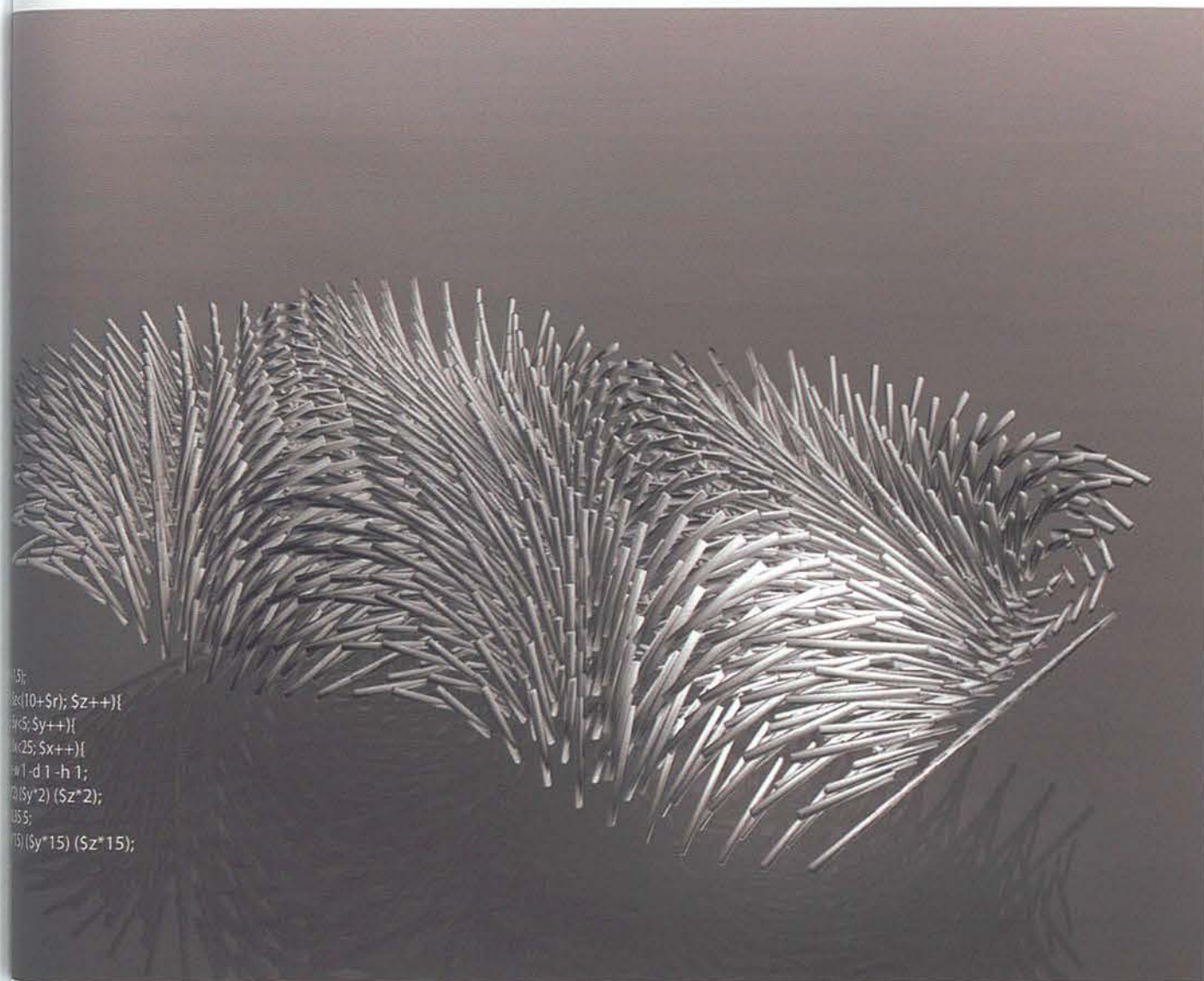
rotate ($x*15) ($y*15) ($z*15);

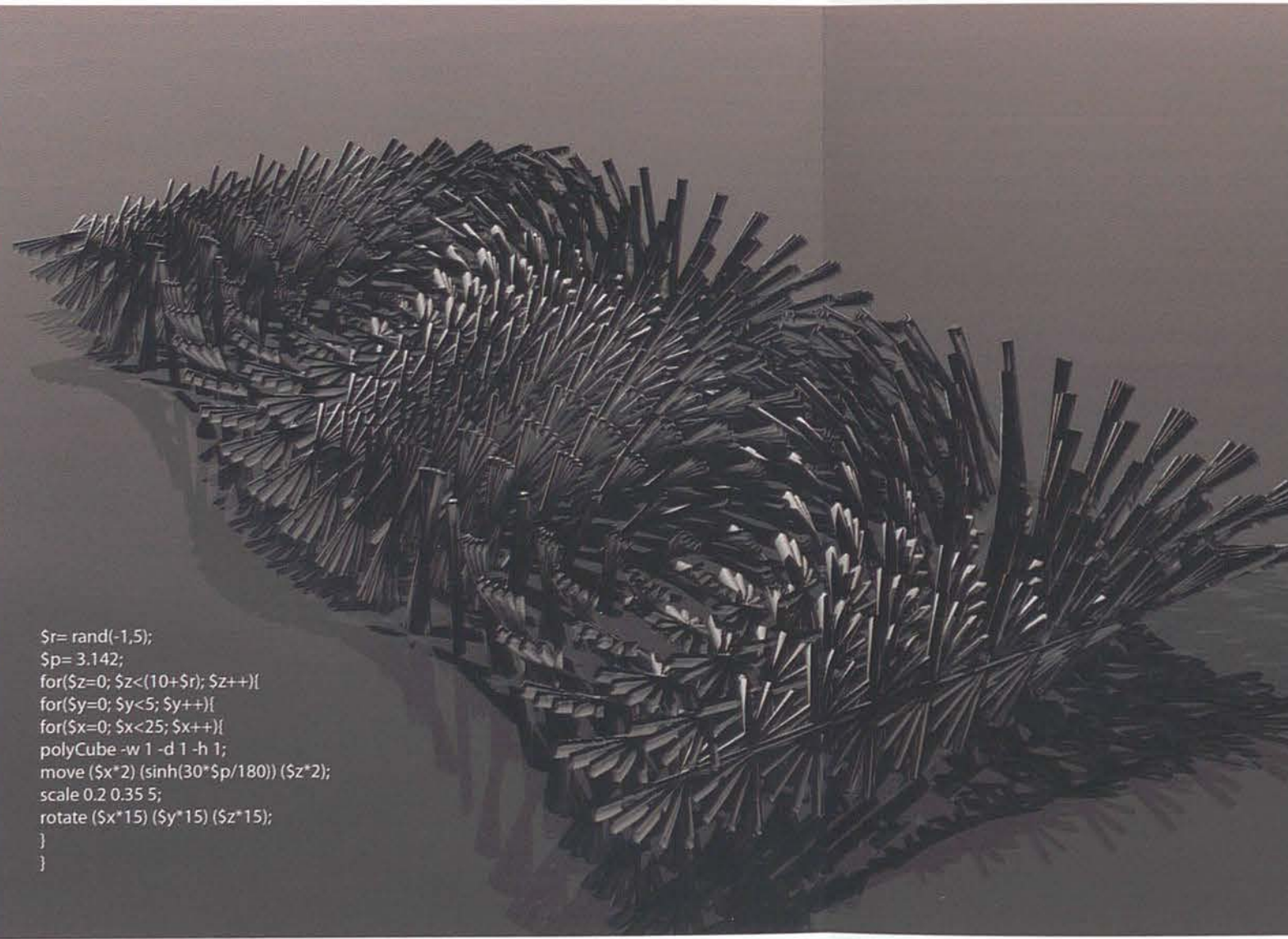
}

}

};

```

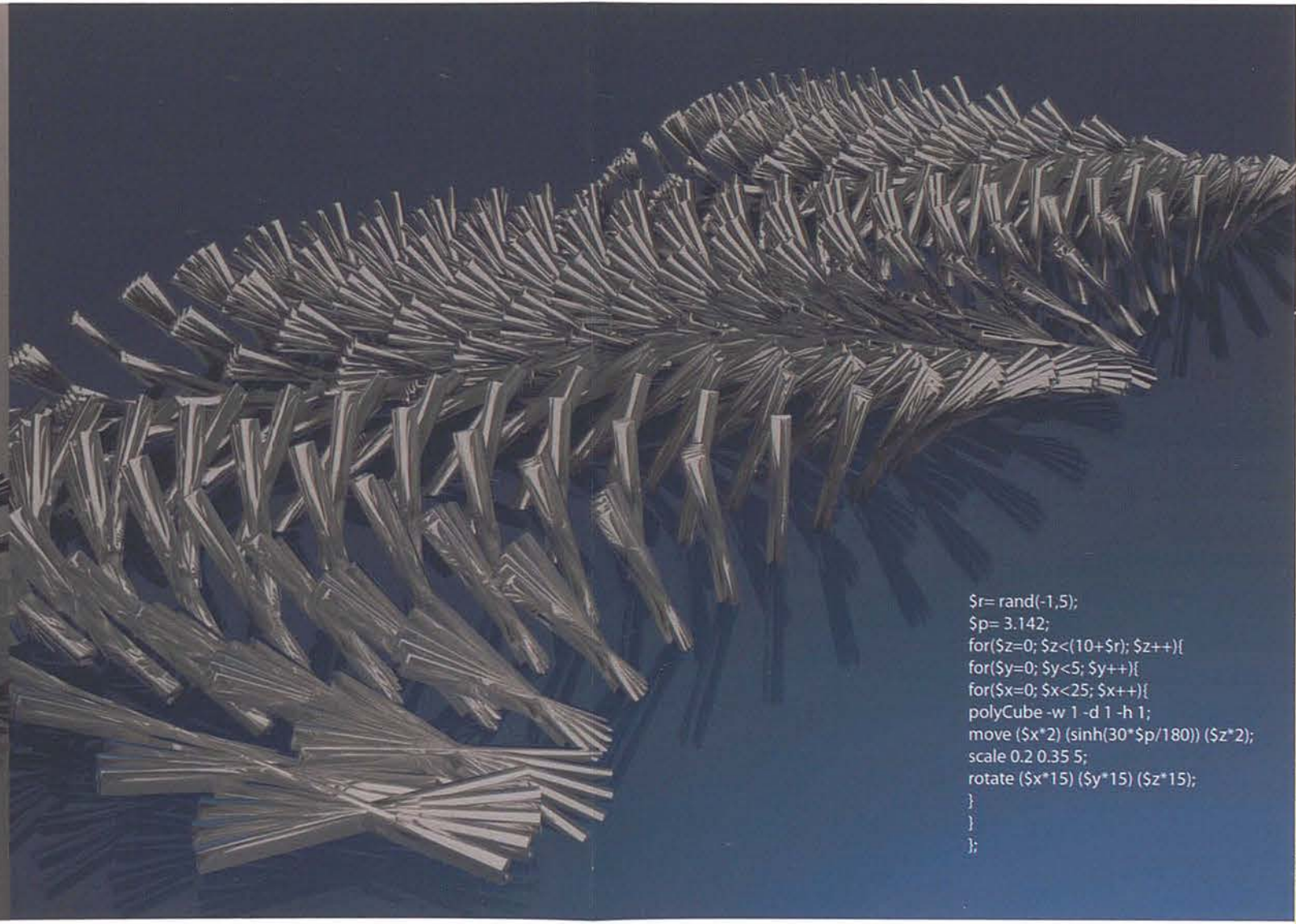





```

$ r= rand(-1,5);
$ p= 3.142;
for($z=0; $z<(10+$r); $z++){
  for($y=0; $y<5; $y++){
    for($x=0; $x<25; $x++){
      polyCube -w 1 -d 1 -h 1;
      move ($x*2) (sinh(30*$p/180)) ($z*2);
      scale 0.2 0.35 5;
      rotate ($x*15) ($y*15) ($z*15);
    }
  }
}

```



```

$ r= rand(-1,5);
$ p= 3.142;
for($z=0; $z<(10+$r); $z++){
  for($y=0; $y<5; $y++){
    for($x=0; $x<25; $x++){
      polyCube -w 1 -d 1 -h 1;
      move ($x*2) (sinh(30*$p/180)) ($z*2);
      scale 0.2 0.35 5;
      rotate ($x*15) ($y*15) ($z*15);
    }
  }
}

```

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